DOCUMENT RESUME

ED 283 353 EC 192 783

AUTHOR	Smith, Ann N.; Burgess, Heidi
TITLE	School Nurse Achievement Program II: Curriculum Adaptation for Expanded and Accelerated Dissemination. Final Report.
INSTITUTION	Colorado Univ., Denver.
SPONS AGENCY	Office of Special Education and Rehabilitative Services (ED), Washington, DC.
PUB DATE	29 Aug 86
GRANT	G008302509
NOTE	135p.; Developed at the Health Sciences Center.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	*Computer Assisted Instruction; Delivery Systems; *Disabilities; Elementary Secondary Education; *Inservice Education; *Instructional Effectiveness; *Instructional Material Evaluation; *School Nurses; Videotape Recordings
IDENTIFIERS	*School Nurse Achievement Program

ABSTRACT

The final report of a 3-year project to improve the delivery of inservice training for school nurses through the development of computer assisted instructional programs and videotapes concerning handicapped children is presented. The School Nurse Achievement Program (SNAP) is an on-going national inservice training course. The evaluation project described in this study attempted to: (1) measure the changes in nurses' attitudes, knowledge, skills, and tasks over time as a result of taking the SNAP course; (2) measure the accuracy, clarity, and sufficiency of the computer tutorials and the videotape; (3) compare the effectiveness of the computer and non-computer versions of the course; and (4) evaluate the usefulness of the advisory council. Materials evaluation involved 631 participants in 13 states. Overall course evaluation indicated that SNAP produced an improvement in nurses' knowledge and skills concerning handicapped children. Nurses using the computer tutorials learned significantly more than participants in the non-computer classes and rated the computer component as useful. A secondary result of the program was a significant decrease in computer anxiety by nurses in the computer program. (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED283353

SCHOOL NURSE ACHIEVEMENT PROGRAM II:

Curriculum Adaptation for Expanded and Accelerated Dissemination

Grant No. G008302509

Project No. 029JH50002

Final Report Submitted to:
Special Projects, Training of Personnel
for Education of the Handicapped,
United States Office of Special Education
and Rehabilitative Services

August 29, 1986

by
Ann N. Smith and
Heidi Burgess

University of Colorado Health Sciences Center
School of Nursing
4200 East Ninth Avenue, Box C287
Denver, Colorado
(303) 394-8733

EC192783

BEST COPY AVAILABLE

ABSTRACT

Special health needs of handicapped children who receive their education in regular public school buildings are supervised by the nation's 30,000 school nurses. The School Nurse Achievement Program (SNAP) is an on-going national inservice training course, developed at the University of Colorado for school nurses, which has been highly effective in increasing children. This present proposed project aims to improve the method of delivery and distribution of SNAP, to meet the national demand of a large and diverse population of school nurses.

Course delivery is impeded by 1) cost to the state, both monetary and in man/woman hours; 2) wide variation in school nurses' educational preparation, with some requiring remedial work and some requiring learning enhancement accompanying SNAP; and 3) absence of clinical resources and expert teachers in rural, isolated areas, making it difficult to deliver the course to these communities, while maintaining a standard level of quality.

This project will improve and accelerate the dissemination of SNAP by adapting selected units of the curriculum for instruction via microcomputers and videocassette players in the school nurse's home school. The project's major outcomes will be: 1) development and demonstration of an interactive computer-assisted SNAP curriculum component which adds remedial and enhancement content to the course, standardizes the quality of instruction, and further decentralizes the delivery of the course; 2) development of nursing procedure demonstrations on videotape with self-instructional training materials; 3) demonstration and evaluation, including comparison of cost and school nurse learning achievement of this improved delivery system, for application to inservice programs for other professionals in the public schools; and 4) national professional and community two-way communication of needs pertaining to handicapped children's health in school and of benefits of the improved SNAP delivery system by the National Advisory Council for the School Nurse Achievement Program.

TABLE OF CONTENTS

A. Final Report of Grant Activities........................... 1

1. Accomplishments during the third and final budget period June 1, 1985 to May 31, 1986....... 1

2. Chronological listing of significant events and accomplishments............ 6

B. School Nurse Achievement Program, Final Evaluation Report... 7

1. Executive Summary................................ 7

2. Methodology....................................... 9

3. States Participating in SNAP Evaluation.................13

4. Result Summary....................................13

5. Conclusion..21

6. Statistical Summary of SNAP Evaluation Data.............21

List of Appendices

A. Current Needs Assessment Data Compared to 1980: Reports for Kansas, Missouri and New Jersey

B. Coordinator Training Schedule and List of Participants for March 10-14, 1986

C. SNAP National Advisory Council; Reports of Meetings

A. FINAL REPORT OF THE GRANT ACTIVITIES

This report is the third and last report of project activities. The first report covered the time period from September 1-30, 1983. The second report spanned the time period September 30, 1983 to May 31, 1985. The time period described in Section A of this report is June 1, 1985 to May 31, 1986.

1. Accomplishments during the third and final budget period June 1, 1985 to May 31, 1986.

Accomplishments are described in relation to the specific goals and objectives for the third project year. During this time the computer assisted instructional and video components were fully integrated in the course, School nurse Achievement Program, and disseminated on a national basis.

GOAL 1: TO BROADEN THE ATTITUDES, KNOWLEDGE, SKILLS AND TASKS OF SCHOOL NURSES IN SERVING CHILDREN/ADOLESCENTS WITH HANDICAPS THROUGH A SHORT-TERM EDUCATIONAL COURSE PREVIOUSLY AVAILABLE ONLY TO SELECTED PILOT STATES.

Objective 1.1 Recruitment, by direct invitation, of school nurse leaders in regions, states, and districts to apply for sponsorship of the course for all school and public health nurses providing services to schools.

Accomplishments: State recruitment by direct mail to health, education and voluntary professional associations was done. In addition, direct on-site consultation and other forms of assistance supplemented the state recruitment efforts. On-site consultation was provided by the project director and selected advisory council members as follows: Kansas - consultation with Joyce Markendorf, State School Nurse consultant in Denver by Ann Smith and in Lawrence, Kansas by Edward Meyen in August, 1985; New Jersey - consultation with Jane DeMaio, State School Nurse Consultant, in Trenton, New Jersey by Ann Smith and Ruth Hutchison in December 1985; consultation by Judith Igoe with Suzanne Rothacker, Maternal-Child Health Consultant with the Tennessee Department of Health in Memphis in February 1986; consultation by Judith Igoe with Clemson University School of Nursing in Clemson, South Carolina in March, 1986; consultation in March, 1986 by Ann Smith in Anchorage Alaska with Thelma Robinson, coordinator for Alaska SNAP; consultation by Ann Smith in Casper Wyoming for Wyoming SNAP in March, 1986.

Current needs assessments of learning needs of school nurses were completed for Kansas, Missouri and New Jersey. Reports of these surveys, comparing the results with 1980 National needs assessment data, are located in Appendix A. Telephone consultation for state agencies interested in SNAP has also been an effective recruitment strategy.

As a result of these recruitment efforts, new states enrolled in SNAP this past year are: Alaska through the Alaska School Nurses' Association; Slippery Rock University, Department of Nursing in Pennsylvania; Wyoming through the Wyoming School Nurses' Association; Missouri through the University of Missouri School of Nursing at Columbia; Tennessee through the State Department of Health; and New Jersey under Seton Hall University College of Nursing. Wisconsin, Maryland and South Carolina are currently planning to send coordinators for training in 1987 to initiate programs in their states next year.

Objective 1.2 Conducting a five-day training session in Denver for SNAP coordinators from the geographical areas.

Accomplishments: Coordinator training was held in Denver March 10-14, 1986. New state coordinators representing Missouri, Tennessee and New Jersey participated. A schedule of the training session and a list of participants is located in Appendix B.

Objective 1.3 Deliver SNAP in the nurses' local communities.

Accomplishments: SNAP classes offered in the June 1, 1985 - May 31, 1986 time period are listed below:

Alaska	
Anchorage	April 4, 5; August 29, 1986
Colorado	
Colorado Springs	September 27; October 18; November 15, 1985; January 10, 1986
Denver	August 26 thru December 11, 1985
Indiana	
Gary	August 29; October 31; November 1, 14, 1985
Missouri	
Columbia	September 6 thru December 6, 1986
New Hampshire	
Durham	April 30; May 14; June 18, 1986
Durham	May 7; May 28; June 25, 1986
Pennsylvania	
Harrisburg	October 7, 14, 21, 29, 1985
Harrisburg	October 8, 15, 22; November 5, 1985
Slippery Rock	September 4 thru December 11, 1985
Wyoming	
Casper	January 25; March 15; April 25, 1986

Objective 1.4 Measurement of learning and quality of performance by a standardized achievement test.

Accomplishments: The test was revised to encompass information taught through the computer assisted instructional component and two versions of the achievement test were developed. A complete description of the administration and results of the tests is located in Section B of this report.

GOAL 2: TO EXPAND AND ACCELERATE THE NATIONWIDE DISSEMINATION PROCESS OF THE SCHOOL NURSE ACHIEVEMENT PROGRAM THROUGH THE DEVELOPMENT OF SELECTED COMPONENTS OF THE CURRICULUM FOR DELIVERY BY MAGNETIC MEDIA.

Objective 2.5 Instruct state and area level coordinators to assist nurses to gain access to and use of their school's microcomputers.

Accomplishments: Coordinators from all states attending training in March 1985 and 1986 received special instruction and training materials in the form of slides and instructors' manuals to assist school nurses to learn to use microcomputers.

Objective 2.6 Assemble resource directories of existing software pertaining to handicapping conditions for use by the school nurses for their own continuing education, inservice instruction of teachers and administrators, and health education of children.

Accomplishments: The resource directory has been completed and has been distributed to state coordinators who are implementing the CAI component.

Objective 2.17 Evaluate videotape lessons in selected state sites.

Accomplishments: The videotape Clean Intermittent Catheterization, was produced as a self-instructional lesson for home and school use by school nurses, teachers, parents and health aides. The evaluation was completed in the states sites and the evaluation summary is included in Section B of this report.

GOAL 3: TO PROVIDE A DEMONSTRATION OF A CONTINUING EDUCATION DELIVERY SYSTEM WHICH INCORPORATES INSTRUCTION THROUGH MAGNETIC MEDIA FOR PROFESSIONALS EMPLOYED IN EDUCATION SYSTEMS.

Objective 3.1 Establish a distribution center through the University of Colorado School of Nursing for the entire SNAP curriculum as well as for the individual units consisting of books, lesson plans, microcomputer discs, and videotape.

Accomplishments: Shipment and distribution of course materials continues to be based at the University of Colorado School of Nursing. In the efforts to locate a national distributor, twenty-nine publishers were queried by letter and telephone contact during the past year and none has an interest in publication of the SNAP training materials. Reasons cited are the small size of the national market and the fact that the portion of the market with the greatest potential for sales has already been reached through project activities in twenty-three states.

Distribution of the Clean Intermittent Catheterization training videotape will be undertaken by Learner Managed Designs, Inc. of Lawrence, Kansas. A contract is now being finalized and all promotion and sales will be conducted by the company. Materials for on-going SNAP courses will continue to be distributed under the auspices of the School of Nursing.

Objective 3.2 Conduct a comparative evaluation study including cost comparisons of SNAP courses delivered by the traditional methods and SNAP courses using computer and videotape managed learning components.

Accomplishments: Comparative evaluation of the two methods of course delivery has been completed and results of the study are described in Section B. of this report.

Objective 3.3 Expand distribution of course materials to include schools of nursing offering senior year electives in school health.

Accomplishments: Schools of Nursing which have incorporated SNAP into the curriculum as an elective for undergraduate or continuing education students are: University of Colorado, Slippery Rock University (PA), University of New Hampshire, University of Missouri and Clemson University (SC). Seton Hall University (NJ) and the University of Wisconsin in Eau Claire are currently negotiating license agreements to obtain the SNAP curriculum.

GOAL 4: TO ESTABLISH AN ON-GOING ADVISORY COUNCIL TO REVIEW CURRICULUM MODIFICATIONS TO GUIDE THE DISSEMINATION PLAN AND TO DEVELOP THE PUBLIC AND PROFESSIONAL INFORMATION PROGRAMS.

Objective 4.1 Re-enlist council members who represent parent groups the American Nurses' Association; the American Public Health Association; the Bureau of Community Health Services--Office for Maternal and Child Health; National Association of Directors of Special Education; American School Health Association; American Academy of Pediatrics; National Association of State School Nurse Consultants; National Association of School Nurses; the National Education Association; and the National

Association of Pediatric Nurse Associates and Practitioners. Four new members representing the fields of computer application in medicine and education will be added.

Accomplishments: The last two meetings of the six-year-old SNAP Advisory Council were held in May, 1985 and November, 1985. Meeting reports are located in Appendix C. Council members had previously introduced a resolution to form an on-going health-education coalition or national forum for the purpose of improving health services for handicapped children. This group was to evolve from the organizations represented on the council and would seek an independent additional source of funds for its formation and maintenance. At the April 25, 26 1985 meeting the council members retreated from their previous resolution of formation of an on-going body.

In a parallel development, nursing leadership was diverted at this point in time. School nurse leaders meeting in conjunction with SNAP found themselves in deadlocked disagreement on issues pertaining to national standards of school nurse certification. Unfortunately the energy was drained away from the council activities and thus, the decision was made to table any further action on formation of an on-going group. Faced with this situation, the project director, in consultation with Judith Igoe and Edward Meyen, decided to phase out council activities following the fall meeting. The level of achievement of the council had been reached and it was unlikely that the level would be surpassed by the constituted group.

Failure to attain an on-going health and education advocacy coalition or forum does not diminish the many accomplishments of the SNAP National Advisory Council. An outline of the significant amount of work accomplished by the advisors working together from 1980-86 is located in the final meeting report and is described under Objectives 4.2 - 4.5.

Objective 4.2 Charge the council with developing a national awareness campaign for school health needs of handicapped children in conjunction with their represented professional voluntary associations for disabled children.

Accomplishments: In the outline of activities and accomplishments prepared by the council at its final meeting (See Appendix C, November 7, 8, 1985, pp. 10-11) extensive work in the dissemination of SNAP is included. There was a considerable amount of sharing between the organizations represented and resulting generation of resources in the states for SNAP. Parent involvement within the group was high. National organizations and their state affiliates helped to facilitate dissemination of SNAP. Recommendations were made to the Deans Council of Schools of Nursing to include study of disability and chronic illness in the undergraduate and graduate nursing curricula.

The nursing organizations represented felt that their nursing organizations should take increased leadership in practice and policy issues related to child health and disabilities. The organizations also advised that school nurse competencies and marketing there of should be increased.

Other major developments resulting from SNAP include the new projects: 1. First Start, a national training program for paraprofessionals to learn how to work in daycare settings to provide services for handicapped infants and toddlers; 2) Genetic Applications, a regional training program to teach health and education professionals current information about prevention and management of genetically based conditions; and 3) Infant Media Training Packages, for teaching parents, families and professional workers specialized procedures to care for handicapped infants and toddlers. All of these new developments at the University of Colorado School of Nursing have a basis in the experience gained from the development and dissemination of SNAP.

Objective 4.3 Charge the council to guide the adapted dissemination plan to review regional, state and district applications for SNAP, to select pilot locations for introducing the computer assisted instructional and videodisc components.

Accomplishments: The computer assisted instruction and videotape instruction were introduced successfully in eleven states. All of the states wanting to participate in the new delivery method did so. The full description of this activity is included in the evaluation summary in Section B. of this report.

Objective 4.5 Formulate national position statement on issues of concern pertaining to health services affecting handicapped children in school.

Accomplishments: National position statements evolved from the work of the council in the following ways. School nurse leaders working conjointly with SNAP meetings established national standards of school nurse practice and evaluation activities for these standards. The American School Health Association subsequently adopted student/nurse ratio standards and the nurse practitioner organization (NAPNAP) subsequently formulated a resolution supporting improved care of disabled school children. The state special education directors' group (NASDE) formed a resolution supporting SNAP dissemination. Additional areas recognized for the future which need combined health and education attention are: a continued forum for common issues; improvement of the data base documenting needs of disabled and chronically ill children; and, exploration of alternate funding and systems of health care delivery in the schools.

2. Chronological listing of significant events and accomplishments.

April-June, 1985

-- National Advisory Council Meeting in Denver.

-- Videotape underway; SNAP courses in California end; Utah courses begin; evaluation activities continue.

-- Consultation visit to SNAP by Edward Meyen.

-- SNAP 3rd year continuation application approved and funded.

-- National Association of School Nurses, 17th Annual Conference, Denver; Papers presented: "The Evaluation Guide for School Nursing Practice" by Susan Lordi and "School Nurse Achievement Program" by Ann Smith. Keynote address: "School Nursing in the year 2001, Challenge for the Future", by Judith Igoe.

-- Grant Application: "Genetic Applications for Health Professionals", a collaborative School of Nursing and Medicine continuing education proposal based on the SNAP model submitted to the Division of Maternal and Child Health, USPHS, by Ann Smith and Eva Sujanski.

July-September, 1985

-- SNAP state recruitment mailing to thirty states.

-- Videotaping of "Clean Intermittent Catheterization" in Denver area schools.

-- Second SNAP state recruitment mailing; needs assessment and on-site consultation available to organizers of SNAP.

-- Consultation visit to SNAP by Edward Meyen.

-- Colorado Commission of Higher Education reviews and approves SNAP out-of-state courses.

October-December, 1985

-- Editing and revision of all SNAP course materials begins; to be completed by May, 1986.

-- SNAP needs assessment of Kansas school and community health nurses underway with Joyce Markendorf, State School Nurse Consultant.

-- Preparation of grant application, "Advanced School Nursing of Children with Disabilities", (SNAP advanced course) for U.S. Office of Special Education.

January-May, 1986

-- Consultation by Advisory Council members and/or experienced SNAP state coordinators to states planning SNAP upon request of the state. New Jersey, South Carolina, Missouri, Tennessee, Alaska and Wyoming participate.

-- SNAP State Coordinator's Training on March 10 - 14, 1986 in the School of Nursing.

-- Videotape, "Clean Intermittent Catheterization" field-tested in current classes.

-- Preparation of final SNAP report for the Office of Special Education.

B. SCHOOL NURSE ACHIEVEMENT PROGRAM, FINAL EVALUATION REPORT.

1. Executive Summary

During the 1984-1986 project period, the SNAP evaluation had four goals. They were: 1) to measure the change in nurses' attitudes, knowledge, skills, and tasks over time as a result of their taking the SNAP course. 2) to measure the accuracy, clarity, sufficiency, interest, learning effectiveness, and usability of the computer tutorials and the videotape. 3) To compare the change in nurses' attitudes, knowledge, skills and tasks between programs (i.e., computer and non-computer programs) and 4) to evaluate the usefulness of the advisory council.

Evaluation methods included expert reviews of the new materials (i.e., the computer tutorials and videotape), pre-testing of the computer tutorials, and extensive evaluation of all aspects of the course (including the tutorials and the video tape) via pre- and post-course survey instruments, achievement tests, and follow-up evaluations. 631 participants in 13 states participated in the evaluation.

Results of both the final evaluation and final achievement test showed that SNAP did produce an improvement in nurses' knowledge and skills regarding the care of handicapped children. When asked to indicate the extent to which they felt SNAP increased their competence in various activities relating to the care of handicapped children, the nurses said their competence was increased slightly to considerably for essentially all the activities. Achievement test scores confirmed the learning as well.

The course also produced a change in attitude in about 3/4 of the participants, though 1/4 of the participants felt they had a very positive attitude about handicapped children before taking the course; thus their attitude did not change significantly as a result of participating in SNAP.

Change in activities was measured via the SNAP follow-up evaluation which asked nurses to indicate whether they were doing various activities relating to the care of handicapped children a lot more, a little more, about the same, or less than they were doing before they took the SNAP course.

Results indicated that most of the nurses were doing several of the activities more than they were before SNAP. Although less than 10% were doing any one of the activities a lot more, most of the activities were being done a little more by over half of the nurses responding to the follow-up questionnaire. Many indicated that time pressures and staffing pressures were the cause of their not doing some of these things more than they were. Nevertheless, results of the follow-up evaluation clearly show that SNAP is having a considerable effect on the type and extent of care handicapped children are receiving in the schools with SNAP-trained nurses.

When the results of the computer classes were compared to the non computer classes, the computer tutorials look very good. Although most of the nurses had not used computers before SNAP, and a majority had some level of computer-anxiety, most participants had no difficulty using the computer tutorials, and thought the computer component was either "useful" or "very useful: after they used it. A comparison of achievement tests scores confirms the usefulness of the tutorials--students in the computer classes learned significantly more (i.e., they scored significantly better on the achievement tests) than did the participants in the non-computer classes.

The nurses also had considerably less computer anxiety after taking the SNAP course with the computer. Before taking the class, over 1/2 of the nurses in the computer sections felt either "somewhat uncomfortable" with computers or "scared to death" at the prospect of having to use one. After taking SNAP, however, 43% said they felt completely comfortable using a computer and another 50% felt "not too bad." Only 8% felt somewhat uncomfortable, and none were "scared to death." Thus, the nurses' "computer literacy" increased significantly. While not a primary goal of SNAP, this change was certainly a beneficial secondary effect.

All the other aspects of the SNAP evaluation were positive as well. Participants especially liked the modules, the resource lab, and the speakers (as they had before) as well as the opportunity to meet with other school nurses. While they thought there was a great deal of information given in a very short period of time, most thought this was a benefit, not a drawback of the course. Overall, SNAP continues to be a very successful, very well received, and the new innovations appear to be adding considerably to the already high quality of the course content.

2. Methodology

a. Goals

This section of the report covers the period September 1, 1983 to May 31, 1986. During that time, the evaluation of SNAP had four goals. They were:

1) to measure the change in nurses' attitudes, knowledge, skills, and tasks over time as a result of their taking the SNAP course.

2) to measure the accuracy, clarity, sufficiently, interest, learning effectiveness, and usability of the computer tutorials and the videotape.

3) to compare the change in nurses' attitudes, knowledge, skills, and tasks between programs (i.e., computer and non computer programs)

4) to evaluate the usefulness of the advisory counsel.

b. Methodology

Much of the evaluation effort during this three-year period focused on evaluating the tutorials and the video tape which were the two new components of the SNAP course. These items were evaluated extensively before they were introduced to the SNAP classes and continued to be evaluated further by the classed that used them.

Before they were introduced, all of the computer tutorials and the videotape were reviewed by a number of "content experts" who checked them for accuracy, clarity, sufficiency, interest, and learning effectiveness. All of the reviewers did a very careful and thorough job and most made extensive comments. The comments were reviewed, and when appropriate, changes were made in both the videotape and in the computer tutorials as a result of the comments received.

The computer tutorials were then pre-tested by a group of Denver-area school nurses, who not only reviewed the content, but more importantly, tested the usability of the computer system. Several minor problems were discovered during this test, and instructions for using the computer discs were clarified so that later users could use them without trouble. Only after "passing" these local reviews, were the computer tutorials and the videotape copied and released to SNAP classes nationally.

---

[1] Earlier evaluations were summarized in Laura Goodwin, Ph.D., Maureen Keef, RN, MS, and Anne Wells, RN, MS, "School Nurse Achievement Program, Participant Evaluation Summary Report," 1983, School Health Programs, University of Colorado Health Sciences Center, Denver, CO.

In the classes, the primary evaluation method was a series of survey instruments which collected a wide variety of data. On the first class day, a background questionnaire was given to all students. This questionnaire, called the participant data sheet, asked basic background and demographic questions and also asked two questions about prior computer use.

During 1984 and early 1985, students also took a pre-program test of cognitive knowledge which was very similar to the final achievement test that they would be given at the end of the course. (Two very similar tests were written and exchanged, so that some classes got one test as the pre-test and the other as the post test; other classes had the same two tests but the opposite tests were used as pre- and post-tests.) This confirmed the similarities between the two tests and assured the differences in scores were not simply attributable to the fact that one test was easier than the other.

Students in the computer classes then evaluated each of the tutorial sets as they went through them. If they had comments, they were asked to include them on the score sheets they turned in to show they had completed the tutorial sets. These comments were reviewed as part of the formative evaluation and will be used to revise the tutorials before the next round of production.

Similarly, students who used the video tape on clean intermittent catheterization filled out an evaluation form on the video and the associated workbook. The instrument asked participants to rank the clarity of each of the major segments of the tape, asked whether anything was missing or misleading, if they had any unanswered questions, and overall, how useful the videotape was.

Additional data were collected at the final SNAP classes in the participant evaluation questionnaire and the SNAP achievement test. The participant evaluation questionnaire collected information on the degree to which participants' competence in various critical areas was increased as a result of taking SNAP. It also asked participants whether or not their perceptions of handicapped children had changed after taking SNAP, and if so, how.

In addition, the evaluation instrument collected both quantitative and qualitative data on the usefulness of each aspect of the course, including the computer component. This component was given particular attention during this evaluation period, since this and the videotape were the new aspects of the course. The other parts of the course--e.g., the modules, lectures, resource lab, etc., had been in use for several years already and had received extensive evaluation. Thus, while the evaluation continued to cover these aspects of the course, during 1984-86, more effort was put on evaluating the computer tutorials and the video tape and comparing the classes that used them to the earlier classes which did not.

Thus, in addition to asking participants to rank the usefulness of the computer component using the same scale they used for the other course components, the evaluation asked how comfortable they felt using a computer, now that the class was over, and if they had any problems accessing a computer or using the computer to complete the tutorials.

The final evaluation also asked about the major strengths and weaknesses of the SNAP program and asked for suggestions for improving SNAP.

Also on the last class day, students took an achievement test which measured cognitive learning. As discussed above, for one year, this test was one of two that were exchanged and given both as pre-tests and post-tests. This allowed an objective comparison of pre-class and post-class knowledge.

The pre-post comparison proved to have problems, however. Given the amount of class time needed for other things, these tests could not be very long. Thus, they both consisted of only 34 multiple choice questions. Writing 34 multiple choice questions which accurately measured learning of the vast amount of information transmitted by SNAP proved to very difficult--in fact, essentially impossible. Thus, the tests only tested a very small portion of the material actually covered by SNAP and probably did not fairly assess students' learning.

As a result, the two-test approach was abandoned in 1985 in favor of one longer post-class achievement test which was designed primarily to compare learning of students in the computer classes to learning of students in the non computer classes. This test was 67 questions long, and while it suffered the same problem of coverage as the earlier tests, the test's increased length improved the topic coverage at least to some extent.

In addition to writing questions on each of the major topic items covered in SNAP, the test was divided into three sections--one which included information which was just given in the computer tutorials, one which covered information given just in the modules, lecturers, and other segments of the course other than the computer, and one segment which covered information which was in both the computer tutorials and other class segments. By comparing overall and section scores of students who used the computer to scores of those who did not, further information was gained about the effect of the computer component on learning.

Six months after completing the course, all SNAP participants were sent a follow-up questionnaire which was primarily designed to measure changes in their behavior or activities that resulted from their participation in SNAP. This questionnaire also asked nurses in the computer classes whether they had used a computer in their nursing work since SNAP, and if yes, what for.

The data collected was subjected to both quantitative (i.e. statistical) and qualitative analysis. The quantitative analyses completed include:

1) Descriptive statistics on data from the a) participant data sheet; b) the participant evaluation; c) the follow-up questionnaire; d) the achievement tests; and e) the video evaluation questionnaire.

2) T-Tests and/or analyses of variance to assess differences in results for computer and non computer classes. Comparison were done for: a) achievement test scores; b) participant evaluation responses; and c) follow-up questionnaires.

3) Comparisons of student's reactions to computers before and after taking the computer class were compared.

4) Cross-tabulations, correlations, and analyses of variance to investigate why some students (and whole classes) liked the computer better than others.

5) Reliability testing for the three achievement tests.

6) Analysis of qualitative data from open-ended questions on a) participant evaluations; b) follow-up evaluations; c) tutorial report forms; d) video evaluation questionnaire.

c. Sample

The entire population of classes (and hence students) was included in the evaluation. From 1984 through 1986, this consisted of 30 classes and 631 students. States participating in the full evaluation included: California, Oklahoma, Virginia, Ohio, Pennsylvania, Colorado, Indiana, Montana, Utah, Minnesota, and Wyoming. Of these, 11 of the classes utilized the computer component (N for the computer was 256).

In addition New Hampshire and Alaska started classes in 1986 after the cut-off date for classes to be fully evaluated. However, they did participate in the evaluation of the videotape and the results of that evaluation are included in the report which follows.

The following list shows the number of students in each state who were included in this evaluation.

3. States Participating in SNAP Evaluation

STATE	N (for evaluation purposes)	
Alaska	8	(videotape evaluation only)
California	289	
Colorado	12	
Indiana	14	
Minnesota	46	
Montana	9	
New Hampshire	10	(videotape evaluation only)
Ohio	14	
Oklahoma	16	
Pennsylvania	63	
Utah	31	
Virginia	73	
Wyoming	40	
TOTAL	631	

4. Result Summary

All of the statistical results of the evaluation are presented in tabular form in the statistical summary which follows this report. The highlights however are given below.

Part I: Participant Characteristics

* The average age of the participants was 44.

* 71% of the participants were school nurses.

* An average of the participants had been in their current positions for 75 months; also on the average, they had been school nurses for 92 months.

* For 22% of the participants, the diploma was the highest earned degree; for 48% and 12% the BSN and other BA or BS degrees were the highest earned degrees, respectively; 17% had Master's degrees.

* 27% of the participants said they had previous special training in working with handicapped students; 31% said that they worked in a special school for handicapped students.

* Prior to the beginning of SNAP, 71% of the participants indicated that they did participate in IEP conferences and 45% of the participants said that they wrote the health component for the IEPs.

* On average, the participants served 2.29 elementary schools (with 1100 students) 2.00 jr. high schools (640 students) and 1.60 senior high schools (1100 students).

* The most common handicapping conditions the nurses encountered in their students were learning

disabilities (x=69/nurse), and chronic illnesses (x=53/nurse). Less common were mental retardation (x=29/nurse), emotional disabilities (x=25/nurse), physical handicaps (x=21/nurse), vision disabilities(x=21/nurse), and hearing disabilities (x=15/nurse).

- In answer to the computer questions, 33.8% of the participants who responded said they had used a computer before, while 66% had not. Most participants also reported feeling uncomfortable with the prospect of using a computer. In answer to the question, "How comfortable do you feel using a personal computer?" only 9% answered "completely comfortable," and another 33% felt "not too bad." Forty six percent reported feeling "somewhat uncomfortable" with computers, while 13% said they were "scare to death." Thus over half had some computer-anxiety before using the tutorials, which was likely to influence at least their initial response to the experience.

Part II: Responses to the SNAP Participant Evaluation

Despite their initial discomfort with computers, most students did not experience difficulty using the computer. When asked at the end of the last class in the participant evaluation whether they had had any difficulty using the computer, only 0.5% reported having great difficulty, while 10% had moderate difficulty. Another 17% had said they had sight difficulty, and 71%--over two-thirds--had no difficulty at all.

Comfort levels, too, improved markedly by the end of the SNAP program. At that point students were again asked how comfortable they felt using personal computers. This time 43% said they felt completely comfortable and another 50% felt not too bad. Only 8% were still somewhat uncomfortable, and none reported feeling scared to death. When compared to their answers given on the first class day, the improvement is significant at the .001 level.

In the participant evaluation, nurses were also asked to rate the computer component according to the same scale they had used to rate other course components. This scale was:

5 = definitely useful
4 = useful
3 = undecided
2 = not useful
1 = definitely not useful

Over sixty percent of those who answered this question said the computer was definitely useful or useful; only 16% said it was not useful or definitely not useful. Twenty-two percent were undecided. These numbers are very encouraging, given the newness of the medium, and the number of nurses who had never used a computer before.

However, some classes thought the computer was considerably more useful than did other classes. 83% of the participants in Casper and 79% of the participants in Salt Lake thought the computer was useful or definitely useful; Costa Mesa and Bay Coast, CA were almost as high. The definitely useful and useful rankings from the other classes, however, were in the 30 and 40% range.

Hypothetically, these differences might be attributable to differences in the way the computer was presented to the participants, or it could be due to individual differences between the people in the class--for instance, differences in age, years as a school nurse, whether or not the person had used a computer before, or their general level of computer anxiety.

Other possibilities might be difficulties participants had using the computer during the course--difficulties with access or difficulties using the computer.

However, statistical results do not indicate any strong relationship between any of these variables and satisfaction with the computer. Comparative frequency distributions, non-parametric correlation, and analysis of variance all seem to indicate that the relationship between these variables is weak.

Talking with the coordinators, the differences seem most likely to be personal factors. Some classes had "good" students, others not. The ones who were dissatisfied with the computer were ones, according to the coordinators, who were dissatisfied with everything, and they just happened to congregate in a few classes.

Another possibility, which appeared in Wyoming, was participants who lived in a large state and who had to travel a significant distance to get to the workshops liked the computer tutorials--and the modules--because home study better suited their needs than more classroom time. This, in fact, is part of why the tutorials were developed and thus it is interesting to note that they did help to fulfill that need for Wyoming participants. Other than this, there does not seem to be any systematic way of predicting or influencing who will and who will not like the computer. By and large, however, most people did like it.

Some nurses did have problems with the computer component, though most were correctable problems. The most common problem involved access. When asked "Did you have any difficulty obtaining access to a computer to complete the tutorials?" 134 (66% of those answering) said they had no difficulty. Sixty nine others, however, (34% of those answering) did have difficulty obtaining access to an Apple. The most common problems encountered were that the school(s) did not have Apple computers, or that the computers were too busy for the nurses to use them at convenient times.

More nurses reported access problems in the open-ended part of the questionnaire. When asked for their comments on the computer component, 69 (34%) said a suitable computer was hard to obtain; 32 (16%) said the computer was too busy to use as much as they needed to or when they needed to; another 12 (6%) reported having PCs available, but not Apples. These numbers are higher than those found in the quanmtitative access question--probably because the open ended question came first, and many students who reported their problems in the open ended section left the close-ended, quantitative question blank.

Nevertheless, most of the nurses did manage to get a computer, even though, in many cases, the notion of the staff using the schools computers for continuing education was very new. Their relatively high level of success is very encouraging--and as the number of Apples in schools increases (as it appears to be doing), access should become even less of a problem.

Other problems were mentioned less often: 14 (6%) wanted a permanent record of the material in the tutorials (which they did not have); 11 (5%) were unhappy with the program because it does not allow students to back up to previous questions. 13 (6%) thought the tutorials took too much time, 20 (7%) disagreed with some of the right answers, and 10 (5%) thought the wording was confusing.

However many more positive comments were made than negative ones; though they did not group as neatly, people liked the review, thought the computer was fun, and just generally said the tutorials were "great."

On other aspects of the course, when asked to indicate the intent to which they felt SNAP increased their competence in various activities relating to the care of handicapped children, all of the activities except 1 was ranked 3.5 or above or above on the scale

5 = increased my competence considerably
4 = increased my competence slightly
3 = undecided
2 = I knew that material already
1 = I didn't know the material, but the material presented didn't help my feelings of competence.

The activities were:

+ Use appropriate screening procedures to detect physical and emotional handicaps.

Modify screening techniques (e.g., vision and hearing screening, assessment of vital signs, height and weight) for use with handicapped children, if necessary.

+ Perform specific procedures (e.g., tube feeding, skin care, catheterization) and use adaptive/assistive devices and/or special equipment required by some handicapped children, as needed.

* Write the health component of an IEP, including prioritized health needs and nursing intervention.

+ Modify environmental conditions to meet safety requirements of handicapped children.

* Instruct/counsel handicapped children and their families, teachers, and classmates regarding the handicapped child's health needs and treatments.

* Instruct, delegate, supervise others (handicapped child, families, school health personnel) in the implementation of therapeutic measures.

+ Participate in school staffings as a member of a multidisciplinary team.

* Evaluate the effectiveness of nursing interventions implemented with handicapped children.

The activities preceded by *s were all ranked above 4.0; those marked with a + were between 3.5 and 4.0. The only activity ranked lower than that was modify screening techniques (which was ranked 3.39).

The specific components of the SNAP curriculum -- Resource Lab, Case STudy Assignment, Team Assignments, Lectures, Slide-Tape Series, Group Sessions, Modules, and computer tutorials -- were also rated highly on the average, in terms of usefulness of information provided. On the five-point scale, the average ratings were 4.0% above, except for the Team Assignment (3.90) and the computer tutorials (3.73). The Graduate-credit Component, which was rated by only 134 participants, received an average quality rating of 3.82.

73% of the participants said that their perceptions of handicapped children had changed because of participating in SNAP. When asked to elaborate on how or in what ways their perceptions had changed, the most frequent response was that SNAP had broadened their understanding, awareness, and sensitivity to the needs/problems of handicapped children and their families. Of those who said that their perceptions had not changed, many indicated that they had worked with handicapped children before and were already well aware of their needs.

When asked to indicate what they perceived as the major strengths of SNAP, the aspects mentioned most often were: the modules; the speakers and lectures; the topics covered and the specific, relevant nature of the information provided; the contacts with other nurses; the resource materials and/or the resource lab and the computer tutorials. The most frequently mentioned weaknesses were: too little time to cover all the content included in the curriculum; too little discussion of modules and/or case studies, not enough hands-on experience, and the computer tutorials. (The tutorials were named as a strength much more other then a weakness, however).

When asked for their suggestions for improving SNAP, a large number of different responses were given. Some of the more common ones included: increase the number of contact hours; increase the emphasis on and discussion of the modules; good, "no changes needed"; make assignments clearer; increase discussion of case studies; and increase the hands-on practice.

b. Achievement Tests

A further measure of the success or failure of the computer lessons was obtained by comparing student scores on the achievement test given on the last day of the course. In the fall of 1984, students in both the computer and the non-computer course were given the same set of pre- and post tests which covered material taught in both the computer and the non computer courses. Beginning in the spring of 1985, all students were given a new achievement test (as a post-test only) which contained material covered only in the computer tutorials, as well as material from other components of the program. If, as expected, many of the students did not know the material in the tutorials (hence needed the tutorials for remedial work) then students' scores from the computer classes should have been higher than the scores in the non computer classes, especially on the computer part of the new test. If the review material was not needed, the two classes should have scored the same on both final tests.

Indeed, the average scores in the computer classes was higher for all the tests. On tests 1 and 2 (the first two sets of post-tests), the mean scores were 24.0 and 23.4 respectively our of a possible 31 for the non computer classes, and 25.2 and 24.3 for the computer classes. While not a large difference, a t-test indicates that the difference is significant at the .05 level.

The newer test shows a greater difference in scores between the computer and non computer groups. The mean for the non computer class was 47.0, while the mean for the computer classes was 52.0--5 points higher for the 67-item test. This difference is significant at the .01 level and indicates the tutorials did increase participants' learning.

As expected, the difference in scores was primarily due to differential knowledge on the computer questions. The computer group scored much higher on the computer-only section of the test; (23.0 vs 19.8), but they also scored higher on questions which were not covered in tutorials (24.9 vs 23.7) and on the combined section (12.8 vs 11.9). While these latter differences are much smaller, they are significant at the .05 level.

These findings do indicate that the computer tutorials are teaching information which the students do not otherwise know. Some of these material is not presented elsewhere, and is therefore especially important; other parts of the material are presented elsewhere in the course, but the computer tutorials help to reinforce the learning that takes place by other methods. The achievement tests, therefore, indicate that the tutorials are quite worthwhile.

c. Clean Intermittent Catheterization Videotape and Workbook Evaluation

The videotape and workbook on clean intermittent catheterization was evaluated by 28 people from Alaska, New Hampshire, Wyoming, Colorado, and Texas. The questionnaire first asked users to rank the video and workbook sections on a 1-5 scale regarding clarity of the material. Respondents ranked all of the sections very highly--most sections of the video and the workbook were ranked over 4.5 where 4=clear and 5= very clear. In fact, only the video and workbook sections on the case study was ranked lower than this--at 4.26 and 4.42 respectively.

Only 4 of the 28 respondents noticed anything they felt was misleading or inaccurate, while 6 had one or more unanswered questions. These are listed in the statistical summary section.

A final question asked "overall, how would you rate the videotape and workbook?" 25 (89%) rated the video and workbook very useful, 3 (11%) ranked it as useful and none said not sure, or not useful.

The open ended final comments were also very positive. The comment made most often was that nurses wanted a copy of the workbook to keep and/or wanted access to the video again in the future. Clearly, all the nurses found the video very helpful and several indicated interest in similar videos on different subjects.

d. Follow-Up Evaluation

At the time of this report, the follow-up evaluation had been returned by 305 participants. The primary goal of this part of the evaluation was to determine how much (or whether) the nurses' behavior changed as a result of attending SNAP. The first part of the evaluation asked participants to indicate how much more or less they are doing particular activities with handicapped students than they did before they took the SNAP course. The activities are the same ones listed on the participant data sheet they filled out when they started the course. The choices were that they did each activity much more than before (1), a little more than before (2), no change (3), or less than before (4). (Thus the lower the number, the more they were doing a particular activity).

The activity which increased the most was numbers of contacts with teachers concerning handicapped students. Twelve percent of the nurses said they were doing that a lot more; another 54% said their teacher contacts had increased a little.

For all the other activities, less than 10% of the nurses said they were doing it a lot more, but over 50% were doing several of them a little more than before. The ones done more often include using appropriate screening procedures with handicapped students, modifying screening techniques for use with handicapped students, (modifying environmental conditions to meet handicapped childrens' safety needs) instructing/counseling handicapped children or their families about the child's needs, instructing, delegating or supervising others about therapeutic measures, and evaluating the effectiveness of nursing interventions.

In a second set of questions, nurses were asked whether the number of handicapped children they worked with since SNAP had increased, decreased, or remained the same. Most (51%) said they had remained the same, though 38% indicated that the number had increased some. Participants were also asked about the number of contacts with parents, teachers, and outside agencies and about the amount of support they were receiving. The numbers of contacts with parents, teachers, and outside agencies increased at least a little for over half of the respondents and the support received increased for over 40%.

Those activities mentioned as increasing least often were performing specific procedures required by some handicapped children participating in IEP conferences, and writing the health component of the IEP.

These findings indicate strongly that SNAP is having a long term effect since nurses are doing many of the "SNAP" activities more than they were before they took the course.

e. The Advisory Council

The final aspect of the evaluation was the advisory council. The program staff made an assessment of the advisory council board on their value to the staff in designing and implementing the SNAP program; this is discussed elsewhere in this report.

As part of the evaluation, however, the advisory council members were also queried to determine their own views of their goals, functions and achievements. This information was collected, first, in questionnaires sent out to council members, and then, for those who did not return the questionnaires, as telephone interviews.

The questions asked about accomplishments, objectives, and effectiveness of the council. The most significant accomplishments, as seen by the council members were:

1) Guidance to staff on program development.
2) Program dissemination.
3) Interpersonal (council member) interactions in inter-agency interactions.
4) Establishment of the computer component of course.
5) Increased awareness of handicapped health issues.

More specifically, the council members were asked about the council's effectiveness in planning, and developing the educational program, disseminating SNAP throughout the country, communicating information to professional groups in health and education.

By and large council members thought the council and staff cooperated to attain these three goals. Problems in dissemination were noted by several, but they did not feel there was more that either the staff on the council could do. The roadblock was within the state they indicated.

Most of the council also thought communication to professional groups was well done, though several indicated even more contact could be made in educational organizations, through journals, and with parents.

A fourth question asked the council if there was any objective that had not been achieved. By for the most common response was fuller dissemination--to move states and more nurses within each state. Also mentioned were planning practicum time for nurses who had taken SNAP, defining future priorities, and greater linkage to the educational process and IEPs. Most people answered this question, however, by indicating that SNAP has met--and even gone beyond--initial objectives.

5. Conclusion

Clearly the results of this final evaluation are very positive. SNAP has been brought to a very large number of nurses in many states and has been very well received. The recent additions--the computer modules and the videotape have been very effective and have added to the quality of the course. The fact that SNAP is continuing in a number of states beyond the grant period--and that new states are enrolling to begin the program is a tribute to how well the program has been received. Detailed statistical results for the final evaluation follow in the statistical summary.

6. Statistical Summary of SNAP Evaluation Data

Introductory notes: The total number of participants in this data pool was 631. However, the N for each of the questions may be larger or smaller, since not all classes succeeded in filling out all the forms, and a number of the questions allowed for multiple responses. Thus the N for each particular question will be given along with the other data reported.

Statistical symbols used are X = mean; S = standard deviation; N = number of cases; md = median

Part I: Background Data from the Participant Data Sheet

Question #

#9. Age

Range: 21 to 77
X: 43.78
S: 10.05
n: 290

#10. Present Position

Position	Number	Percentage of those who answered
School Nurse (incl. SNP)	194	64.2
Special Ed Nurse	12	4.0
Administrator/Supervisor	16	5.3
Public Health/Staff Nurse (Health Dept. of Clinic)	63	20.9
Other	17	5.6
No Response	329	---
	631	100.00

#11. Length of Time in Position, in months

Range: 1 to 342
X: 75.4
S: 70.27
n: 297

#12. Length of Time as a School Nurse, in months

Range: 360
X: 92.19
S: 79.88
n: 282

#13. Number of Schools and Students Served

	$\bar{X}$	S	n
Elementary Schools	2.29	2.80	216
Students	1131.15	1139.43	203
Jr. High Schools	2.00	8.57	133
Students	639.39	630.56	125
Sr. High Schools	1.60	4.50	129
Students	1071.81	1768.19	117

#14. Basic_Nursing_Preparation

Type_of_Program	Number	Percentage of Those_Responding
AD	33	10.8
Diploma	135	44.1
BSN	130	42.5
Other	8	2.6
No Response	325	-
	631	100.0

#15. Highest_Academic_Degree

Type_of_Program	Number	Percentage of Those_Responding
ADN	16	5.2
Diploma	67	21.9
BSN	148	48.4
BA or BS, non-nursing	37	12.1
MSN	16	5.2
MS or MS, non-nursing	22	7.2
No Response	325	-
	631	100.0

#16. Special_Training_in_Working_with_Handicapped?

	Number	Percentage of Those_Responding
Yes	82	27.2
No	219	72.8
No Response	330	-
	631	100.0

#17. Work_in_Special_School_for_Handicapped?

	Number	Percentage of Those_Responding
Yes	93	31.3
No	204	68.7
No Response	334	-
	631	100.0

#18. Number of Handicapped Students Served

Types of Handicap	$\bar{X}$	S	n
Children with emotional disabilities	24.84	39.76	210
Children with specific learning disabilities	69.09	79.75	233
Children with mental retardation	29.05	47.41	212
Children with physical handicaps	20.91	34.64	234
Children with chronic illness	52.69	70.38	232
Children with hearing disability	15.23	22.05	239
Children with vision disability	20.58	42.66	224
Other	160.32	306.04	37

#19. Participate in IEP Conferences?

	Number	Percentage of Those Responding
Yes	210	71.2
No	85	28.8
No Response	336	-
	631	100.0

#20. If yes, Percentage of IEP Conferences participate in.

	Number	Percentage of Those Responding
1- 25%	86	37.9
26- 50%	35	15.4
51- 75%	23	10.1
76-100%	67	29.5
Missing	50	7.9
	631	100.0

#21. Write the Health Component for the IEPs?

Percentage	Number	Percentage of Those Responding
Yes	130	45.7
No	156	54.2
No Response	343	-
	631	100.0

#22. Number of Conferences with teachers

Range: 0-95
X: 21.82
S: 22.23
n: 217
Md: 12.25

#23. Percentage handicapped students had teachers' conference

Percentage	Number	Percentage of Those Responding
0	10	3.6
1 - 25%	106	38.4
26 - 50%	39	14.1
51 - 75%	37	13.4
76 -100%	84	30.4
Missing	355	-
	631	100.0

#24. Number of contacts with parents

Range: 0-95
X: 20.84
S: 21.39
n: 207
Md: 10.44

#25. Percentage handicapped students parents' conferences

Percentage	Number	Percentage of Those Responding
0	7	2.5
1 - 25%	84	30.3
26 - 50%	45	16.2
51 - 75%	46	16.6
76 -100%	95	34.3
Missing	354	-
	631	100.0

#26. Number contact with community health agency

Range: 0-95
X: 16.36
S: 18.60
n: 236
Md: 10.13

#27. Percentage handicapped students community health agency contacts

Percentage	Number	Percentage of Those Responding
0	13	4.9
1 - 25%	128	47.8
26 - 50%	55	20.5
51 - 75%	28	10.4
76 -100%	42	16.5
Missing	365	-
	631	100.0

#28. Used a computer before? (for computer classes only)

Percentage	Number	Percentage of Those Responding
Yes	73	33.8
No	140	66.2
No Response	415	-
	631	100.0

#29. Comfort with computer

	Number	Percentage of Those Responding
Completely comfortable	17	8.9
Not too bad	62	32.5
Somewhat uncomfortable	84	46.1
Scared to death	24	12.6
Missing	440	-
	631	100.0

Part II: Program Participant Evaluation

A. Listed below are a set of activities related to school nurses' work with handicapped children. Please indicate the extent to which you feel your participation in SNAP has increased your competence in each area. The scale is:

5 = increased my competence considerably
4 = increased my competence slightly
3 = undecided
2 = I knew that material already
1 = I didn't know the material, but material presented didn't help my feelings of competence

	1		2		3		4		5				
Activity	n	%	n	%	n	%	n	%	n	%	$\bar{X}$	S	N
4. Use appropriate screening procedures to detect physical and emotional handicaps.	9	2.5	20	5.7	46	13.0	187	53.0	91	25.8	3.94	0.92	353
5. Modify screening techniques (e.g., vision and hearing screening, assessment of vita signs, height and weight) for use with handicapped children, if necessary.	18	5.1	71	20.2	62	17.6	158	44.9	43	12.2	3.39	1.09	354
6. Perform specific procedures (e.g., tube feeding, skin care, catheterization) and use adaptive/assistive devices and/or special equipment required by some handicapped children, as needed.	16	4.5	48	13.6	42	11.9	161	45.6	86	24.4	3.72	1.11	353
7. Write the health component of an IEP, including prioritized health needs and nursing intervention.	10	2.8	21	5.9	27	7.6	128	35.9	171	47.9	4.20	1.00	357

8. Modify environmental conditions to meet safety requirements of handicapped children.	6	1.7	44	12.4	51	14.4	196	55.4	57	16.1	3.72	0.94	354
9. Instruct/counsel handicapped children and their families, teachers, and classmates regarding the handicapped child's health needs and treatments.	1	0.3	26	7.3	22	6.1	175	48.9	273	43.3	4.16	0.85	358
10. Instruct, delegate, supervise others (handicapped child, families, school health personnel) in the implementation of therapeutic measures.	3	0.8	24	6.7	39	10.9	177	49.6	114	31.9	4.05	0.88	357
11. Participate in school staffings as a member of a multidisciplinary team.	6	1.7	52	14.7	29	8.2	133	37.6	134	37.9	3.95	1.10	354
12. Participate in school staffings as a member of a multidisciplinary team.	3	0.8	17	4.8	21	5.9	180	50.4	136	38.1	4.20	0.82	357
13. Resource Lab	2	0.6	16	4.8	29	8.7	141	42.5	144	4.23	4.23	0.85	332
14. Case Study Assignment	5	1.4	11	3.1	31	8.8	155	43.9	151	42.8	4.24	0.85	353
15. Team Assignment	8	2.4	11	3.3	65	19.5	173	51.8	77	23.1	3.90	0.85	334
16. Lectures	1	0.3	4	1.1	18	5.1	154	43.4	178	50.1	4.42	0.67	355
17. Slide-Tape Series	5	1.8	9	3.3	48	17.4	132	47.8	82	29.7	4.00	0.88	276
18. Group Sessions (with	1	0.3	6	1.8	16	4.7	163	47.6	155	45.6	4.37	0.68	340
19. Self-Instructional modules	2	0.6	6	1.7	32	9.2	112	32.2	196	53.3	4.42	0.78	348
24. Graduate-Credit Component	8	6.0	9	6.7	6	4.5	36	26.9	65	48.5	3.82	1.59	134
25. Computer tutorials (if applicable)	12	6.0	19	9.5	45	22.4	60	29.9	65	32.3	3.73	1.18	201

CLASS-BY-CLASS RATINGS OF THE TUTORIAL COMPONENT

(Numbers are percents of those people answering the question.)

	Definitely useful %	Useful %	Undecided %	Not Useful %	Definitely not Useful %	N
Indianapolis	0	44.4	44.4	0	11.1	9
Costa Mesa	38.5	38.5	15.4	3.6	3.6	26
San Bernadino	8.0	24.0	48.0	4.0	16.0	25
Sacramento	20.0	20.0	33.3	26.7	0	15
Rosemont	25.7	34.3	22.9	11.4	5.7	20
Bay Coast	26.1	34.8	13.0	13.0	13.0	24
Salt Lake	63.2	15.8	10.5	10.5	0	21
Harrisburg	11.1	22.2	33.3	33.3	0	11
Casper	50.0	33.3	11.1	2.8	2.8	40

Question #20. Have your perceptions of handicapped children changed because of SNAP?

	Number	Percentage of Those Responding
1. Yes	248	72.9
2. No	92	27.1
	340	100.0

#23. Would you recommend the SNAP program to other school nurses?

	Number	Percentage of Those Responding
1. Yes	314	93.7
2. No	21	3.4
	335	100.0

#21. Strengths of the SNAP Course

Strength	# of times mentioned	% of total respondents
Course materials	48	14
Speakers/lecturers	67	19
Modules	36	10
Loma Linda Clinic Day	13	4
Computer Tutorials	22	6
Contact with other school nurses	17	5
Case Study	12	3
Group Study	13	4
Practical Nature of Info	15	4
Amount of Material Presented	12	3
Resource Lab	5	1
Parent Panel	3	1
Other (items mentioned only once)	36	10

#21. Frequently Mentioned Weaknesses of the SNAP Course

Weakness	# of times mentioned	% of total respondents
Too much material in too little time	43	12
The computer tutorials	23	7
Not enough hands on experience	11	3
The case study	5	1
Organization	12	3

#26. Did you have any difficulty obtaining access to a computer to complete the tutorials?

	Number	Percentage of Those Responding
Yes	69	34
No	134	66
	203	100.0

#28. Did you have any difficulty using the computer?

	Number	Percentage of Those Responding
1= Great difficulty	4	0.5
2= Moderate difficulty	20	10.1
3= Slight difficulty	33	16.7
4= No difficulty	141	71.2
	198	100.0

#29. How comfortable do you feel using a computer now?

	Number	Percentage of Those Responding
1= Completely comfortable	85	42.7
2= Not too bad	99	49.7
3= Slightly uncomfortable	15	7.5
4= Scared to death	0	0
	199	100.0

$\bar{X}$ = 1.65 S = .617 Md = 1.65

Part III: Achievement Test Results

Overall scores		Total Possible	$\bar{X}$	S	N
Test 1	Post-tests only (post test)	31	24.38	2.91	120
Test 2		31	23.70	3.30	141
Test 3		67	50.88	5.84	168

Comparison between computer and non-computer groups

	$\bar{X}$	
Test 1 - non-computer group	24.01	post test
1 - computer group	25.18	* only
Test 2 - non-computer group	23.37	post test
2 - computer group	24.32	* only
Test 3 - non-computer group	47.00	
3 - computer group	52.02**	

* Difference significant at .05 level
** Difference significant at .01 level

Follow Up Evaluation Responses

So far the follow-up evaluation has been returned by 305 students. The first part of the evaluation asks participants to indicate how much more or less they are doing particular activities with handicapped students than they did before they took the SNAP course. The activities are the same ones listed on the participant data sheet they filled out when they started the course. The following chart indicates their responses to these questions. Their choices were that they did each activity much more than before, a little more than before, no change, or less than before.

	Question	1= Much More		2= Little More		3= No Change		4= Less		Mean	Std. Dev.	N of Cases
		n	%	n	%	n	%	n	%	$\bar{X}$	S	N
6.	Use appropriate screening procedures with handicapped students	19	6.4	165	55.4	109	36.6	5	1.7	2.34	0.62	298
7.	Modify screening techniques for use with handicapped students	29	9.7	138	47.3	126	42.3	5	1.7	2.36	0.68	298
8.	Perform specific procedure required by some handicapped children	7	2.4	43	14.5	236	79.5	11	3.7	2.85	0.50	297
9.	Participate in IEP conferences	18	6.0	71	23.8	193	64.8	16	5.4	2.70	0.67	298
10.	Write health component IEP	11	3.7	72	24.1	206	68.9	10	3.3	2.72	0.59	299
11.	Modify environmental conditions to meet handicapped childrens' safety needs	14	4.7	120	40.3	159	53.4	5	1.7	2.52	0.62	298
12.	Instruct/counsel handicapped children/families about child's needs	24	8.1	165	55.4	104	34.9	5	1.7	2.30	0.64	298
13.	Instruct/delegate/supervise others about therapeutic measures	15	5.0	127	42.6	150	50.3	6	2.0	2.49	0.63	298

continued on next page

14. Participate in school staffings as a member of a multidisciplinary team.	19	6.3	80	26.6	193	64.1	9	3.0	2.64	0.65	301
15. Evaluate effectiveness nursing interventions with handicapped children	25	8.4	133	44.5	136	45.5	5	1.7	2.41	0.67	299

As can be seen on the preceding chart, only 10% or less of the students are doing any of the activities much more than they were before, but over 50% are doing several of them a little more than before. The ones done more often include using appropriate screening procedures with handicapped students, instructing/counseling handicapped children or their families about the child's needs, instructing, delegating or supervising others about therapeutic measures, and evaluating the effectiveness of nursing interventions.

In a second set of questions, nurses were asked whether the number of handicapped children they worked with since SNAP had increased, decreased, or remained the same. Most (54%) said they had remained the same, though 35% indicated that the number had increased some. Participants were also asked about the number of contacts with parents, teachers, and outside agencies and about the amount of support they were receiving. The results of these questions is also given below.

	1= Increased A Lot		2= Increased Some		3= Remained The Same		4= Decreased		Mean	Std. Dev.	N of Cases
Question	n	%	n	%	n	%	n	%	$\bar{X}$	S	N
1. Has # handicapped students you work with	19	6.3	115	38.2	154	56.2	13	4.3	2.54	0.68	301
2. Has # of contacts with parents of handicapped students	21	7.0	149	49.3	121	40.1	11	3.6	2.40	0.67	302
3. Has # of contacts with teachers concerning handicapped students	37	12.3	161	53.5	94	31.2	9	3.0	2.25	0.70	301
4. Has # contacts with outside agencies regarding needs handicapped students	23	7.6	153	50.7	117	38.7	9	3.0	2.37	0.67	302
5. Has amount support for your work with handicapped students	16	5.3	113	37.4	166	55.0	7	2.3	2.54	0.63	302

CLEAN INTERMITTENT CATHETERIZATION
VIDEOTAPE/WORKBOOK EVALUATION

Please answer the following questions for both the videotape and the workbook using the scale given below. 5 = very clear 4 = clear 3 = not sure 2 = somewhat confusing 1 = very confusing

		1		2		3		4		5				
		n	%	n	%	n	%	n	%	n	%	$\bar{X}$	S	N
1. How clear was the introductory information on the benefits of clean intermittent catheterization and why it is often useful in the school setting?	V	0	0	0	0	0	0	5	18	23	82	4.82	0.39	28
	W	0	0	0	0	0	0	6	29	15	71	4.71	0.46	21
2. How clear was the anatomical information on the urinary tract?	V	0	0	0	0	0	0	8	29	20	71	4.71	0.46	28
	W	0	0	0	0	0	0	6	30	14	70	4.70	0.47	20
3. How clear was the discussion of the procedure for catheterizing a boy?	V	0	0	0	0	0	0	9	32	19	68	4.68	0.48	28
	W	0	0	0	0	1	5	6	29	14	67	4.62	0.59	21
4. How clear was the discussion of the procedure for catheterizing a girl?	V	0	0	0	0	0	0	8	28	20	71	4.71	0.46	28
	W	0	0	0	0	1	5	6	29	14	67	4.62	0.59	21
5. How clear was the discussion of caring for the catheter?	V	0	0	0	0	1	4	5	18	22	79	4.75	0.52	28
	W	0	0	0	0	0	0	4	19	17	71	4.81	0.42	21
6. How clear was the description of the warning signs of a urinary tract infection?	V	0	0	0	0	2	7	9	33	16	59	4.52	0.63	27
	W	0	0	0	0	1	5	8	38	12	57	4.52	0.60	21

continued on next page

7.	How clear was the description of the role of the school nurse with reregard to clean intermittent catheterization?	V	0	0	0	0	1	4	9	32	18	64	4.61	0.57	28
		W	0	0	0	0	1	5	7	33	13	62	4.57	0.60	21
8.	How clear was the discussion of how to teach self catheterization?	V	0	0	0	0	1	4	11	39	16	57	4.54	0.58	28
		W	0	0	0	0	1	5	7	33	13	62	4.57	0.60	21
9.	How clear was the information in the case study?	V	0	0	0	0	4	15	12	44	11	41	4.26	0.71	27
		W	0	0	0	0	2	11	7	39	10	53	4.42	0.69	19

10. Did you notice anything in the tape or workbook which you felt was misleading or inaccurate?

Yes 4 (14.3%) No 24 (85.7%)

Items inaccurate

- Credé maneuver for children unable to strain at end of cath
- I felt is was OK to limit fluids at school, but there is also a need to provide fluids at some time to flush the the kidneys to help prevent infection. I also felt this was geared to young children and should be upgraded for young adults
- possible need to reinforce total fluid intake--mention was made of drinking less prior to engagement.

11. Was there anything in the tape or workbook which left you with unanswered questions?

Yes 6 (22.2%) No 21 (77.8%)

What?
- Should explain creda
- How often should catheter be replaced?
- Should attendant helping with cath ever wear gloves to protect self?
- Should students be taught to push on bladder after flow of urine has stopped?
- Why clean, not sterile?
- I thought it could have been more infor mative about home home care and fluid intake.

12. Overall how would you rate the videotape and workbook?

Very useful	Useful	Not Sure	Not too useful	Not at all useful
25 (89.3%)	3 (10.7%)	-0-	-0-	-0-

$\bar{X} = 4.89$ SD = 0.32 N = 28

13. Do you have any additional comments on the CIC videotape and workbook?

1. I would like a copy of the workbook to keep. It would be extremely helpful.
2. Great--would like a copy for school use.
3. Would like a copy of book.
4. Excellent! Start doing some on other procedures.
5. Would like to see it made available for parents and children who need the procedure.
6. Great resource!
7. I would like to be able to borrow them in the future should the need arise.
8. Would like to have it again--PHN office very interested in viewing. Will share with staff in next school year--having student enroll in 87 with exact situation--kdg. level.
9. Simply that this is an outstanding program and should be in every school district health services library so nurses can review as the need arises.
10. I was really glad to see "real" children in the demonstration instead of diagrams only! Would like to have some more re: case study on video good info. well presented.
11. Only that in the "old school thinking" need for sterile technique. I encourage self-care and any new procedure to help students.
12. Excellent video! Concise yet covered topic very well--I hope this will be available for purchase and I look forward to future SNAP videos. I was very impressed with the workbook also.
13. Presented in a clear, simple method.
14. I have never done this procedure on an ambulatory patient but after viewing the video feel confident in teaching it as done in the manual and viewed.

APPENDIX A

THE SNAP SCHOOL NURSE SURVEY FOR KANSAS*

FEBRUARY 1986

SNAP (The School Nurse Achievement Program) at the University of Colorado conducted a mailed-questionnaire survey of 200 school nurses in Kansas to help Kansas officials decide whether or not SNAP might be useful to their nurses. The questionnaire used was the same as one originally sent to a random sample of 4000 school nurses across the country in 1980. For comparison, in this report both 1986 Kansas results and 1980 national results will be given.

The survey was intended to obtain the following types of information:

1) a profile of the in-service needs of school nurses related to handicapped children and adolescents;

2) an analysis of the types of handicapping conditions requiring special attention at school and a modified school health program;

3) a task inventory of school nurse activities performed for children and adolescents eligible for assistance from the Handicapped Children's Educational Act and the problems encountered;

4) ratio of nurses to pupils; and

5) evidence of school and community support for school nurses.

PROCEDURES

Two hundred seventy-seven school nurses were randomly selected from a mailing list of all the Kansas school nurses supplied to the SNAP office by the Kansas School Health Consultant. These nurses were sent the questionnaire (copy attached as Table I) in early December 1985 and responses were received into early January 1986. The response rate was good--144 out of 277--(51.9%) which is much higher than the 26% return rate from the nationwide survey done in 1980. Thus, the Kansas return rate, alone, may indicate a significant interest in the topic areas of the questionnaire.

---

* Since this survey was a duplicate of one sent out nationwide in 1980, and the findings, in many cases, were very similar to the earlier study, much of the explanatory material in this report was taken from the earlier report, entitled "The SNAP School Nurse Survey (May 1980): Summary of Procedures and Results by Nancy K.O. Hester, Laura D. Goodwin, and Judith B. Igoe.

This survey conducted and report written by Heidi Burgess, Ph.D., SNAP Associate for Evaluation.

RESULTS

The summary statistics for the responses of the 144 nurses are shown in Table 2. Here statistics are presented according to ten subparts of the questionnaire. These subparts are:

a) description of position and education preparation

b) description of school population

c) familiarity with P.L. 94-142

d) perceived competence (related to activities with handicapped children)

e) routinely performed activities (with handicapped children)

f) knowledge needs

g) educational alternatives

h) school physician

i) support system

j) question on how the questionnaire was answered

Each block of Table 2 has two numbers. The first is the result for Kansas; the second is the result from the national survey done 5 years earlier. The results will be described here according to the five specific types of information the survey was designed to obtain. Reference will be made throughout to the various sections of the questionnaire and the summary statistics (Table 2).

I: A Profile Of The In-Service Needs Of School Nurses Related To Handicapped Children and Adolescents

Only 29.9% of the respondents indicated that they had received special training in working with handicapped children (Sec. A #4) and only 53.5% felt that they have a clear understanding of the school nurse's role in carrying out the mandate of P.L. 94-142, The Education of Handicapped Children Act (Sec. C #8). These numbers are slightly higher than the earlier national numbers which were 24.8% and 42.7% respectively.

Also related to in-service needs were the responses to the items in section D--perceived competence--in which the nurses were asked to indicate whether or not they felt competent to perform various activities for handicapped students. As can be seen from Table 2, Part D, activities nurses felt least competent to perform were: screening for speech and language problems (11.8%); assessing the mental status of a child (14.6%), assessing the neurological status of a child (18.1%), interpreting educational and psychological test results (22.9%), caring for an ileo loop (34.7%), monitoring a child with a respirator (27.8%) and monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia) (10.4%). These are the same in-service needs as those cited in the 1980 survey. However, it is interesting to note that the Kansas nurses indicated that they felt less competent to perform each of the 26 activities listed in the questionnaire than did nurses in the national sample drawn five years ago.

In section F--Knowledge Needs--the nurses were asked whether or not they felt satisfied with their knowledge in several areas related to caring for handicapped children in the schools. Only 37.5% of the nurses felt satisfied with their knowledge of the psychodynamic or emotional aspects of handicapping conditions as they affect the child and the family, and only 34.7% of the nurses felt satisfied with their knowledge of current treatments (including medications) for prevalent handicapping conditions.

Items with slightly higher percentages of nurses indicating satisfaction with their knowledge levels were those related to using the nursing process to create a nursing care plan for handicapped students (49.3%); to prinicples of supervision and consultation as they could be used with school personnel (50.7%), to the counseling process (41.0%) and to principles of team development (47.9%). The one item that showed a substantial proportion of nurses feeling satisfied in terms of knowledge was in the area of normal growth and development for the ages of children for whom the nurses provide care (84.0%). As was true for the section on perceived competence, these numbers are generally slightly lower than those obtained from the nationwide sample in 1980; however, the numbers for knowledge of normal growth and development and knowledge of how to use the nursing process to create a nursing care plan for handicapped students were slightly higher than those obtained in the national survey. Nevertheless, the overall results indicate that Kansas school nurses, like the nurses in the earlier national sample, do need additional knowledge in several important areas related to handicapped children and adolescents.

A final component of the questionnaire asked about educational alternatives. 55.6% of the Kansas nurses said they would be interested in obtaining additional education in working with handicapped children/adolescents via self-instructional materials; 70.8% said they would be interested in attending two-day workshops for this educational purpose. A four-month educational program was viewed less favorably (16.7%). The SNAP approach, therefore, which combines self-instructional materials and three all-day workshops (two had originally been planned) appears feasible and attractive to this sample of school nurses.

II. An Analysis of the Types of Handicapping Conditions Requiring Special Attention at School and a Modified School Health Program

The responses to question 7 in Section B provided data related to this purpose of the survey. The results are presented in two ways: 1) means and standard deviations of the numbers of children cited as having each handicap, based only on the responses of nurses who did not leave the item blank; and 2) average percentage of students with each handicap, calculated by dividing the numbers given by the total number of students served by each nurse (section B, questions 6). The two different ways of examining the results are provided because of the problem of blank or missing responses; it could not be determined whether, or when, blank responses meant the same thing as zero. For the percentages, blank responses were equated to zero, while for the means and standard deviations, the blank responses were not included.

Of the types of handicapping conditions given in Section B, the most prevalent were: speech and/or language problems (5% of the nurses' student populations); emotional and/or behavior problems (3.6%), specific learning disabilities (4.8%), mental retardation (1.9%) and physical disabilities (1.2%). Less frequent were legal deafness (.3%) and legal blindness (0.1%).

3) A Task Inventory of School Nurse Activities Performed for Children and Adolescents Eligible for Assistance from the Handicapped Children's Education Act (P.L. 94-142) and the Problems Encountered.

The responses to the items in both Section D and Section E pertain to this purpose. Section D, which was discussed under in-service needs, yielded data that spoke to clinical care and problems encountered in performing various clinical activities essential for handicapped children's care. Section E addressed more specifically what types of educational activity the nurses were providing for handicapped children. While slightly more than half (54.2%) of the nurses said that they consult with and teach teachers about the needs of handicapped children, only 41.7% said that they teach other children about handicapping conditions. 53.5% said that they teach handicapped children good health practices, but only 28.5% have been involved in instruction for parents of handicapped children. Further, only 26.4% said that they create nursing care plans for each handicapped child. All of these statistics are lower than the comparable national statistics from five years ago (see Table 2 for exact numbers.) However, more Kansas nurses said that they do participate in IEP (Individualized Education Plan) conferences for handicapped students than did the national sample (54.2% compared to a national level of 48.8%). Of those that responded "yes" to IEP conference participation, the average number of conferences attended was 54.1; whereas the average based on all respondents was 12.4.

IV. Ratio of Nurses to Pupils

In response to question 6, section B, the average number of children served by the nurses was 1050. The average percentages of children with the various types of handicapping conditions (question 7, section b): were summarized in Part III, above.

As discussed earlier, these percentages are probably conservative, since they were calculated in such a way that blank responses were equated to zero. Therefore, those nurses who left an item blank because they could not give an estimate were considered to have zero students with that condition.

V) Evidence of School and Community Support for School Nurses

Section I of the questionnaire dealt with this purpose. The nurses were asked to indicate on a 5-point scale (from "extremely supportive" to not at all supportive" how supportive of school nurses they felt various school and community groups were. Generally, the perceived support levels were high; on the average, all were above moderate (3) on the point scale and many were above (4). Complete statistics are given in Table II.

SUMMARY

As was true for the 1980 national survey, the results of this survey indicate that Kansas school nurses could benefit from additional education and training in regard to their work with handicapped children and adolescents. Areas of greatest educational needed seemed to be: 1) screening for speech and language problems, 2) assessing the mental status and neurological status of children, 3) interpreting educational and psychological test results, 4) caring for ileo loops, monitoring children with respirators, and monitoring children for signs and symptoms of dysreflexia.

Knowledge needs included knowledge of the psychodynamic or emotional aspects of handicapping conditions, knowledge of current treatments for prevalent handicapping conditions, knowledge of principles of supervision, consultation, counseling, and team development as they related to working with handicapped children and other school personnel, knowledge of ways to teach handicapped children, their parents, and other children, about the conditions and how to manage them; and knowledge of the need for, and ways to more effectively participate in IEPS for handicapped children. Finally, the respondents themselves indicated a desire for additional education and training to help them more effectively work with handicapped children and adolescents, especially via self-instructional materials and short all-day workshops.

FOR CODING ONLY
Col.
Card 1 A
STATE 2-3 __ __
ID# 4-6 __ __ __

TABLE 1

SNAP School Nurse Questionnaire

1. Are you currently practicing school nursing? ____ yes ____ no 7 __
If no, what is your position? ______________________________ 8-9 __ __

2. Do you work in a school specializing in education of the handicapped? ____ yes ____ no 10 __

3. My most advanced nursing educational preparation is: 11 __
____ A.D.
____ Diploma
____ B.S.
____ M.S.
____ Ph.D.
____ Nurse Practitioner

4. Have you received special training in working with handicapped children? ____ yes ____ no 12 __

5. How long have you been practicing school nursing? ____ years (fill in years) 13-14 __ __

6. Please write in an estimate of the number of students you serve. ________ __ __ __ __ __
15 16 17 18 19

7. Please write in an estimate of the number of handicapped students you serve in each of the areas listed below.

a. children who are legally deaf ________ 20-22 __ __ __
b. children who are legally blind ________ 23-25 __ __ __
c. children with speech and/or language problems ________ 26-28 __ __ __
d. children with emotional and/or behavioral problems ________ 29-31 __ __ __
e. children with specific learning disabilities ________ 32-34 __ __ __
f. children with mental retardation ________ 35-37 __ __ __
g. children with physical handicaps ________ 38-39 __ __
h. other (please list what they are ______________ 40-42 __ __ __
______________________________ 43-44 __ __
45-47 __ __ __
______________________________ 48-49 __ __
50-52 __ __ __

8. Do you feel you have a clear understanding of the school nurse's role in carrying out the mandate of PL 94-142, The Education of Handicapped Children Act? ____ yes ____ no 53 __

9. Please indicate by placing a check mark under either "yes" or "no" whether you do or do not feel competent to do the activities for handicapped students listed below.

	yes	no	
a. screening for problems in growth and development	____	____	54 __
b. screening for vision problems	____	____	55 __
c. screening for hearing problems	____	____	56 __
d. screening for dental problems	____	____	57 __
e. screening for speech and language problems	____	____	58 __
f. assessing the mental status of a child	____	____	59 __
g. assessing the neurological status of a child	____	____	60 __
h. assessing nutritional and feeding problems of a child	____	____	61 __

(over)

	yes	no	
i. interpreting educational and psychological test results	______	______	62 __
j. assessing and intervening in elimination problems	______	______	63 __
k. providing maintenance of skin and skin checks	______	______	64 __
l. teaching crutch walking	______	______	65 __
m. teaching wheelchair transfers	______	______	66 __
n. caring for decubitus ulcers	______	______	67 __
o. caring for a tracheostomy	______	______	68 __
p. doing passive range of motion exercises	______	______	69 __
q. administering a nasogastric feeding	______	______	70 __
r. supervising toileting procedures (bowel)	______	______	71 __
s. caring for a ileo loop	______	______	72 __
t. caring for a supra-pubic catheter	______	______	73 __
u. caring for an external urine collector	______	______	74 __
v. supervising clean intermittant catheterization	______	______	75 __
w. performing a urethral catheterization	______	______	76 __
x. monitoring a child with a respirator	______	______	77 __
y. care of a child who is convulsing	______	______	78 __
z. monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia)	______	______	79 __

10. Please indicate by placing a check mark under either "yes" or "no" whether you routinely perform the activities listed below.

Card 2 B
Col:

	yes	no	
a. Consultation and teaching of teachers about the needs of handicapped children	______	______	2 __
b. Teaching the other students about handicapping conditions in order to decrease negative attitudes toward them	______	______	3 __
c. Have you ever used these educational materials?			
1. What if You Couldn't (multi-media kit)	______	______	4 __
2. We Did It...So Can You (Teacher training program)	______	______	5 __
3. Like Me, Like You (film)	______	______	6 __
d. Teaching handicapped children good health practices	______	______	7 __
e. Teaching the parents of handicapped children about their child's handicap and the care necessary to maintain the child's health.	______	______	8 __
f. Creating nursing care plans for each handicapped child.	______	______	9 __
g. Participate in I.E.P. (Individualized Education Plan) conferences for handicapped students (If yes, what percent of I.E.P. conferences that occur do you participate in?) ______	______	______	10 __
h. Supervision of a non-health personnel in administration of physical care to a handicapped child	______	______	11 __

11. Please indicate, by placing a check mark under either "yes" or "no" whether or not you feel satisfied with your knowledge in the areas listed below.

	Yes	no	
a. Knowledge of normal growth and development for the ages of children you provide care for.	______	______	12 __
b. Knowledge of the psychodynamic or emotional aspects of handicapping conditions as they affect the child and the family	______	______	13 __
c. Knowledge of how to use nursing process to create a nursing care plan for handicapped students	______	______	14 __

yes no

d. Knowledge of principles of supervision and consultation as they could be used with other school personnel. ______ ______ 15 __

e. Knowledge of the process of counseling as it could be used with individuals, families and groups. ______ ______ 16 __

f. Knowledge of the principles of team development as they could be used in working with a team of school personnel. ______ ______ 17 __

g. Knowledge of current treatments (including medications) recommended for prevalent handicapping conditions. ______ ______ 18 __
(If "no", which conditions do you feel you need to know more about?) ________________________ 19-20 __ __
____ 21-22 __ __
____ 23-24 __ __
25-26 __ __
27-28 __ __

12. If there were an opportunity for you to obtain additional education in working with children and adolescents who have handicapping conditions/developmental disabilities, would you be interested in (check all that apply):
____ self-instructional materials 29 __
____ two-day workshop 30 __
____ four-month educational program 31 __
____ other (explain: ________________________ 32-33 __ __
____)

13. Do you have a school physician? ____ yes ____ no 34 __
If "yes", approximately how many hours per week does he/she work in the school(s)? ________ 35 __

14. In your opinion, how supportive of school nurses are each of the following groups or persons? (circle one response choice for each group or person listed).

	Extremely Supportive		Moderately Supportive		Not at all Supportive	
a) students	5	4	3	2	1	36 __
b) parents	5	4	3	2	1	37 __
c) teachers	5	4	3	2	1	38 __
d) special services personnel	5	4	3	2	1	39 __
e) school superintendent	5	4	3	2	1	40 __
f) school principals	5	4	3	2	1	41 __
g) school secretaries	5	4	3	2	1	42 __

15. Did you complete this questionnaire (check one): 43 __
____ in terms of your own opinions, activities, etc.
____ on behalf of several nurses in your district (if so, how many?________)

16. Comments:

Thanks very much for participating in this survey. Please use the stamped, addressed envelope and return it to us as soon as possible.

TABLE 2

SUMMARY STATISTICS FOR SCHOOL NURSE ACHIEVEMENT PROGRAM QUESTIONNAIRE - KANSAS, 1986 and NATIONAL, 1980 DATA

Kansas results are given first: Kansas N = 144
National results are second, in parentheses; National N = 834

A. Description of Position and Educational Preparation

	Percentages		
	Yes	No	Other[1]
1. Are you currently practicing school nursing?	98.6 (98.0)	1.4 (1.9)	0 (.1)
2. Do you work in a school specializing in education of the handicapped?	34.0 (23.6)	61.8 (72.5)	4.2 (3.8)
3. My most advanced educational preparation is:			
Associate Degree	5.6 (5.0)		
Diploma	42.0 (27.5)		
B.S.	40.6 (51.6)		
M.S.	10.5 (12.7)		
Ph.D.	0.0 (.1)		
Other	.7 (3.0)		
(Are you a Nurse Practitioner?)	.7 (4.9)		
4. Have you received special training in working with handicapped children?	29.9 (24.8)	68.8 (70.5)	1.4 (4.7)

	Years		
	Minimum to Maximum	Mean	S.D.
5. How long have you been practicing school nursing?	0 - 30 (0 - 35)	9.9 (9.1)	6.9 (7.0)

---

[1] Other: includes missing responses, yes-no both checked, question marks, not applicable, and "others do this".

TABLE 2...continued

B. Description of School Pcpulation

6. Please write in an estimate of the number of students you serve.

Frequencies Min. to Max.	Mean	S.D.
50 - 11,000 (12 - 30,000)	1050.8 (2136.5)	1347.9 (2387.1)

7. Please write in an estimate of the number of handicapped students you serve in each of the areas listed below:

	Minimum to Maximum	Mean	S.D.	Average % of Total No. Served
a. children who are legally deaf (n=662)	0-40 (0-120)	2.2 (3.2)	5.5 (9.2)	.3 (.2)
b. children who are legally blind (n=674)	0-12 (0-300)	.95 (2.3)	1.7 (13.4)	.1 (.1)
c. children with speech and/or language problems (n=653	0-300 (0-1500	30.8 (68.7)	37.6 (134.8)	5.0 (3.8)
d. children with emotional and/or behavioral problems (n=658)	0-300 (0-3200)	17.6 (43.0)	30.0 (136.8)	3.6 (2.6)
e. children with specific learning disabilities (n=667)	0-153 (0-1500)	33.7 (73.1)	29.4 (124.1)	4.8 (4.4)
f. children with mental retardation (n=666)	0-100 (0-1500)	12.5 (35.1)	19.3 (96.3)	1.9 (3.0)
g. children with physical handicaps (n=687)	0-75 (0-300)	5.1 (17.5)	9.5 (33.8)	1.2 (1.5)
h. other (n=51)	0-63 (0-500)	2.0 (46.3)	7.3 (80.2)	.5 (.1)

S.D. = Standard Deviation

Page 2 of 8 pages

TABLE 2....continued

C. Familiarity with P.L. 94-142

	PERCENTAGES		
	Yes	No	Other
8. Do you feel you have a clear understanding of the school nurse's role in carrying out the mandate of P.L. 94-142, The Education of Handicapped Children Act?	53.5 (42.7)	44.4 (52.5)	2.1 (4.9)

D. Perceived Competence

	PERCENTAGES		
	Yes	No	Other
9. Please indicate by placing a check mark under either "yes" or "no" whether you do or do not feel competent to do the activities for handicapped students listed below:			
a. screening for problems in growth and development	42.4 (62.9)	52.8 (31.9)	4.9 (5.5)
b. screening for vision problems	81.3 (88.1)	18.1 (9.6)	.7 (2.3)
c. screening for hearing problems	79.2 (78.2)	19.4 (18.1)	1.4 (3.7)
d. screening for dental problems	47.9 (67.0)	50.0 (28.7)	2.1 (4.4)
e. screening for speech and language problems	11.8 (17.3)	84.7 (74.2)	3.5 (8.6)
f. assessing the mental status of a child	14.6 (18.6)	81.9 (73.0)	3.5 (8.4)
g. assessing the neurological status of a child	18.1 (21.1)	79.2 (72.3)	2.8 (6.6)
h. assessing nutritional and feeding problems of a child	55.6 (71.3)	42.4 (24.6)	2.1 (4.1)
i. interpreting educational and psychological test results	22.9 (23.3)	76.4 (71.0)	.7 (4.7)
j. assessing and intervening in elimination problems	61.1 (66.7)	35.4 (27.9)	3.5 (5.5)
k. providing maintenance of skin and skin checks	79.2 (84.5)	20.1 (12.0)	.7 (3.5)

TABLE 2....continued

D. Perceived Competence...continued

	PERCENTAGES		
	Yes	No	Other
l. teaching crutch walking	52.1 (61.8)	44.4 (33.8)	3.5 (4.5)
m. teaching wheelchair transfers	54.9 (60.0)	44.4 (35.1)	.7 (4.9)
n. caring for decubitus ulcers	66.0 (76.1)	31.9 (19.8)	2.0 (4.0)
o. caring for a tracheostomy	53.5 (60.8)	43.8 (34.9)	2.8 (4.3)
p. doing passive range of motion exercises	66.7 (63.4)	32.6 (30.9)	.7 (5.7)
q. administering a nasogastric feeding	65.3 (65.6)	34.0 (29.3)	.7 (5.2)
r. supervising toileting procedures (bowel)	71.5 (73.9)	26.4 (21.7)	2.1 (4.4)
s. caring for a ileo loop	34.7 (39.9)	63.9 (55.0)	1.4 (5.0)
t. caring for a supra-pubic catheter	52.1 (58.2)	46.5 (37.1)	1.4 (4.8)
u. caring for an external urine collector	75.7 (76.0)	22.2 (19.5)	2.1 (4.4)
v. supervising clean intermittant catheterization	75.0 (75.5)	23.6 (20.4)	1.4 (4.0)
w. performing a urethral catheterization	72.9 (74.8)	25.0 (21.0)	2.1 (4.2)
x. monitoring a child with a respirator	27.8 (33.2)	70.8 (61.5)	1.4 (5.3)
y. care of a child who is convulsing	86.1 (86.6)	12.5 (8.4)	1.4 (5.1)
z. monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia)	10.4 (11.4)	79.9 (74.5)	9.7 (14.2)

TABLE 2...continued

E. Routinely Performed Activities

	PERCENTAGES		
	Yes	No	Other
10. Please indicate by placing a check mark under either "yes" or "no" whether you routinely perform the activities listed below:			
a. Consultation and teaching of teachers about the needs of handicapped children	54.2 (63.3)	45.1 (33.2)	.7 (3.4)
b. Teaching the other students about handicapping conditions in order to decrease negative attitudes toward them	41.7 (47.1)	56.9 (49.2)	1.4 (3.6)
c. Have you ever used these educational materials:			
1. What If You Couldn't (multi-media kit)	2.1 (1.7)	95.1 (94.8)	2.8 (3.4)
2. We Did It..So Can You (teacher training program)	1.4 (1.6)	93.1 (91.8)	5.6 (6.6)
3. Like Me, Like You (film)	5.6 (6.5)	89.6 (88.0)	4.9 (5.5)
d. Teaching handicapped children good health practices	53.5 (58.8)	44.4 (37.4)	2.1 (3.9)
e. Teaching the parents of handicapped children about their child's handicap and the care necessary to maintain the child's health	28.5 (35.9)	70.1 (58.9)	1.4 (5.2)
f. Creating nursing care plans for each handicapped child	26.4 (26.5)	70.1 (68.8)	3.5 (4.7)
g. Participate in I.E.P. (Individualied Education Plan) conferences for handicapped	54.2 (48.8)	39.6 (45.0)	6.3 (6.2)
h. Supervision of a non-health personnel in administration of physical care to a handicapped child	36.1 (39.1)	61.1 (56.8)	2.8 (4.1)

TABLE 2...continued

E. Routinely Performed Activities...continued

If "yes" is indicated to participation in I.E.P. conferences, what percent of I.E.P. conferences that occur do you participate in?

	Mean Percentage	S.D.
1. Based on all respondents	12.4 (25.3)	30.6 (38.5)
2. Based on "yes" respondents only	54.1 (53.8)	43.1 (40.1)

F. Knowledge Needs

11. Please indicate, by placing a check mark under either "yes" or "no" whether or not you feel satisfied with your knowledge in the areas listed below:	PERCENTAGES		
	Yes	No.	Other
a. Knowledge of normal growth and development for the ages of children you provide care for	84.0 (78.3)	16.0 (18.8)	0 (2.8)
b. Knowledge of the psychodynamic or emotional aspects of handicapping conditions as they affect the child/family	37.5 (38.8)	61.1 (57.7)	1.4 (3.5)
c. Knowledge of how to use nursing process to create a nursing care plan for handicapped students	49.3 (43.3)	48.6 (52.8)	2.1 (3.9)
d. Knowledge of principles of supervision/consultation as they could be used with other school personnel	50.7 (55.0)	47.2 (41.2)	2.1 (3.7)
e. Knowledge of the process of counseling as it could be used with individuals, families and groups	41.0 (51.2)	56.9 (44.6)	2.1 (4.2)
f. Knowledge of the principles of team development as they could be used in working with a team of school personnel	47.9 (52.8)	48.6 (43.4)	3.5 (3.8)
g. Knowledge of current treatments (including medications) recommended for prevalent handicapping conditions	34.7 (38.7)	55.6 (54.3)	9.7 (7.0)

TABLE 2....continued

G. Educational Alternatives

	PERCENTAGES Yes	 No	 Other
12. If there were an opportunity for you to obtain additional education in working with children/adolescents who have handicapping conditions and/or developmental disabilities, would you be interested in:			
self-instructional materials	55.6 (69.4)	44.4 (23.9)	0 (6.7)
two-day workshop	70.8 (72.7)	29.2 (20.5)	0 (6.8)
4-month educational program	16.7 (17.6)	83.3 (75.3)	0 (7.1)
other	(10.9)	(82.3)	(6.8)

H. School Physician

	Yes	No	Other
13. Do you have a school physician?	.7 (29.9)	99.3 (67.6)	0 (2.5)

	Mean Hours	S.D.
If yes, approximately how may hours per week does he/she work in the school?	8.0 (5.7)	0 (9.6)

I. Support Systems

14. In your opinion, how supportive of school nurses are each of the following groups/persons?

(Responses given on a 5-point scale)

	Mean	S.D.
a. school secretaries	4.441 (4.129)	.728 (.999)
b. special services personnel	4.224 (4.050)	.817 (.941)
c. school principals	4.271 (3.984)	.830 (.999)
d. students	4.252 (3.971)	.791 (.924)
e. teachers	4.326 (3.934)	.774 (.981)
f. parents	3.965 (3.732)	.851 (.873)
g. school superintendent	3.842 (3.604)	1.058 (1.208)

TABLE 2 ...continued

J. Final Question

PERCENTAGES

	Yes	No	Other
15. Did you complete this questionnaire:			
a. in terms of your own opinions, activities, etc.	97.2 (92.2)	1.4 (5.9)	1.4 (1.9)
b. on behalf of several nurses in your district	1.4 (7.0)	97.2 (90.9)	1.4 (2.2)
	Number of Persons		
	Minimum - Maximum	Mean	S.D.
If so, how many?	– (1 - 25)	– (5.2)	– (4.2)

THE SNAP SCHOOL NURSE SURVEY FOR MISSOURI*

FEBRUARY 1986

SNAP (The School Nurse Achievement Program) at the University of Colorado conducted a mailed-questionnaire survey of 200 school nurses in Missouri to help Missouri officials decide whether or not SNAP might be useful to their nurses. The questionnaire used was the same as one originally sent to a random sample of 4000 school nurses across the country in 1980. For comparison, in this report both 1986 Missouri results and 1980 national results will be given.

The survey was intended to obtain the following types of information:

1) a profile of the in-service needs of school nurses related to handicapped children and adolescents;

2) an analysis of the types of handicapping conditions requiring special attention at school and a modified school health program;

3) a task inventory of school nurse activities performed for children and adolescents eligible for assistance from the Handicapped Children's Educational Act and the problems encountered;

4) ratio of nurses to pupils; and

5) evidence of school and community support for school nurses.

6) other information requested by the Missouri School Nurse Consultant.

PROCEDURES

Two hundred school nurses were randomly selected from a mailing list of all the Missouri school nurses supplied to the SNAP office by the Missouri School Nurse Consultant. The response rate was good--121 out of 200--(60.5%) which is much higher than the 26% return rate from the nationwide survey done in 1980. Thus, the Missouri return rate, alone, may indicate a significant interest in the topic areas of the questionnaire.

---

* Since this survey was a duplicate of one sent out nationwide in 1980, and the findings, in many cases, were very similar to the earlier study, much of the explanatory material in this report was taken from the earlier report, entitled "The SNAP School Nurse Survey (May 1980): Summary of Procedures and Results by Nancy K.O. Hester, Laura D. Goodwin, and Judith B. Igoe.

RESULTS

The summary statistics for the responses of the 121 nurses are shown in Table 2. Here statistics are presented according to ten subparts of the questionnaire. These subparts are:

a) description of position and education preparation

b) description of school population

c) familiarity with P.L. 94-142

d) perceived competence (related to activities with handicapped children)

e) routinely performed activities (with handicapped children)

f) knowledge needs

g) educational alternatives

h) school physician

i) support system

j) question on how the questionnaire was answered

Each block of Table 2 has two numbers. The first is the result for Missouri; the second is the result from the national survey done 5 years earlier. The results will be described here according to the five specific types of information the survey was designed to obtain. Reference will be made throughout to the various sections of the questionnaire and the summary statistics (Table 2).

I: A Profile Of The In-Service Needs Of School Nurses Related To Handicapped Children and Adolescents

Only 9.1% of the respondents indicated that they had received special training in working with handicapped children (Sec. A #4) and only 31.4% felt that they have a clear understanding of the school nurse's role in carrying out the mandate of P.L. 94-142, The Education of Handicapped Children Act (Sec. C #8). These numbers are considerably lower than the earlier national numbers which were 24.8% and 42.7% respectively.

Also related to in-service needs were the responses to the items in section D--perceived competence--in which the nurses were asked to indicate whether or not they felt competent to perform various activities for handicapped students. As can be seen from Table 2, Part D, activities nurses felt least competent to perform were: screening for speech and language problems (7.4%); assessing the mental status of a child (14.9%), assessing the neurological status of a child (26.4%), interpreting educational and psychological test results (14.0%), caring for an ileo loop (23.1%), monitoring a child with a respirator (17.4%) and monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia) (4.1%). These are the same in-service needs as those cited in the 1980 survey. However, it is interesting to note that the Missouri nurses indicated that they felt less competent to perform all but one of the 26 activities listed in the questionnaire than did nurses in the national sample drawn five years ago.

In section F--Knowledge Needs--the nurses were asked whether or not they felt satisfied with their knowledge in several areas related to caring for handicapped children in the schools. Only 26.4% of the nurses felt satisfied with their knowledge of the psychodynamic or emotional aspects of handicapping conditions as they affect the child and the family, also 26.4% of the nurses felt satisfied with their knowledge of current treatments (including medications) for prevalent handicapping conditions.

Other statistics reflecting satisfaction with knowledge levels were also low: knowledge about using the nursing process to create a nursing care plan for handicapped student was 30.6%; knowledge about the principles of supervision and consultation as they could be used with school personnel was 27.3%; knowledge about the counseling process was 24.0%; and knowledge about the principles of team development was 32.2%. The one item that showed a substantial proportion of nurses feeling satisfied in terms of knowledge was in the area of normal growth and development for the ages of children for whom the nurses provide care (66.1%). As was true for the section on perceived competence, these numbers are generally slightly or substantially lower than those obtained from the nationwide sample in 1980. Thus, the overall results indicate that Missouri school nurses, like the nurses in the earlier national sample, do need additional knowledge in several important areas related to handicapped children and adolescents.

Another component of the questionnaire asked about educational alternatives. 43.8% of the Missouri nurses said they would be interested in obtaining additional education in working with handicapped children/adolescents via self-instructional materials and three class days, while 42.1% said they would like to attend 8 three hour classes on the topic. When asked how far they would be willing to travel to attend SNAP (or similar) classes, over 50% said 0-50 miles; 29% said 50-100 miles. Most prefer weekdays, one day rather than 3 days, and class during the school year rather than the summer.

II. An Analysis of the Types of Handicapping Conditions Requiring Special Attention at School and a Modified School Health Program

The responses to question 7 in Section B provided data related to this purpose of the survey. The results are presented in two ways: 1) means and standard deviations of the numbers of children cited as having each handicap, based only on the responses of nurses who did not leave the item blank; and 2) average percentage of students with each handicap, calculated by dividing the numbers given by the total number of students served by each nurse (section B, questions 6). The two different ways of examining the results are provided because of the problem of blank or missing responses; it could not be determined whether, or when, blank responses meant the same thing as zero. For the percentages, blank responses were equated to zero, while for the means and standard deviations, the blank responses were not included.

Of the types of handicapping conditions given in Section B, the most prevalent were: speech and/or language problems (8.5% of the nurses' student populations); specific learning disabilities (10.3%), mental retardation (8.9%) and physical disabilities (6.3%). Less frequent were legal deafness (1.5%) legal blindness (2.9%) and emotional and/or behavioral problems (4.4%) and legal blindness (0.1%).

3) A Task Inventory of School Nurse Activities Performed for Children and Adolescents Eligible for Assistance from the Handicapped Children's Education Act (P.L. 94-142) and the Problems Encountered.

The responses to the items in both Section D and Section E pertain to this purpose. Section D, which was discussed under in-service needs, yielded data that spoke to clinical care and problems encountered in performing various clinical activities essential for handicapped children's care. Section E addressed more specifically what types of educational activity the nurses were providing for handicapped children. Thirty-eight percent of the nurses said that they consult with and teach teachers about the needs of handicapped children, but only 22.3% said that they teach other children about handicapping conditions. 37.7% said that they teach handicapped children good health practices, but only 18.2% have been involved in instruction for parents of handicapped children. Further, only 13.2% said that they create nursing care plans for each handicapped child. All of these statistics are lower than the comparable national statistics from five years ago (see Table 2 for exact numbers.) Similarly, fewer Missouri nurses said that they participate in IEP (Individualized Education Plan) conferences for handicapped students than did the national sample (30.6% compared to a national level of 48.8%). However, those that responded "yes" to IEP conference participation, the average number of conferences attended was 73.9%; whereas, the national level was 53.8%

IV. Ratio of Nurses to Pupils

In response to question 6, section B, the average number of children served by the nurses was 2074. The average percentages of children with the various types of handicapping conditions (question 7, section b): were summarized in Part III, above.

As discussed earlier, these percentages are probably conservative, since they were calculated in such a way that blank responses were equated to zero. Therefore, those nurses who left an item blank because they could not give an estimate were considered to have zero students with that condition.

V. Evidence of School and Community Support for School Nurses

Section I of the questionnaire dealt with this purpose. The nurses were asked to indicate on a 5-point scale (from "extremely supportive" to not at all supportive" how supportive of school nurses they felt various school and community groups were. Generally, the perceived support levels were high; on the average, all were above moderate (3) on the point scale and many were above (4). Complete statistics are given in Table II.

VI. Additional Questions

A number of additional questions were added specifically for the Missouri survey at the request of Nela Beetem. These regarded nurse evaluation, accident procedures, salary levels, membership in professional organizations, and screening activities.

As shown in Table II, 52% of the nurses responding to the survey said they were evaluated but only 18.2% said this evaluation was reflected in a salary increase. The most common salary level was $10-15,000 (34.7%), while 27.3% earned between $15,000 and $20,000 a year.

Concerning accident procedures 70.2% of the respondents use an accident reporting form, which is filled out by a nurse 51.2% of the time. Nurses also do follow up 57% of the time.

Professional organization membership is low: 18% belong to the district school nurse organization and 12% belong to the public health association. Other professional memberships are lower.

With regard to screening activities, over 80% of the nurses do vision and height/weight screening; over 70% do hearing and scoliosis screening, while 69% screen student blood pressures.

Detailed statistical result for all of the survey items can be found in Table II.

SUMMARY

As was true for the 1980 national survey, the results of this survey indicate that Missouri school nurses could benefit from additional education and training in regard to their work with handicapped children and adolescents. Areas of greatest educational needed seemed to be: 1) screening for speech and language problems, 2) assessing the mental status and neurological status of children, 3) interpreting educational and psychological test results, 4) caring for ileo loops, monitoring children with respirators, and monitoring children for signs and symptoms of dysreflexia.

Knowledge needs included knowledge of the psychodynamic or emotional aspects of handicapping conditions, knowledge of current treatments for prevalent handicapping conditions, knowledge of principles of supervision, consultation, counseling, and team development as they related to working with handicapped children and other school personnel, knowledge of ways to teach handicapped children, their parents, and other children, about the conditions and how to manage them; and knowledge of the need for, and ways to more effectively participate in IEPS for handicapped children. Finally, the respondents themselves indicated a desire for additional education and training to help them more effectively work with handicapped children and adolescents.

Page 1 of 4

FOR CODING ONLY
Col.
Card 1 A
STATE 2-3 ___ ___
ID# 4-6 ___ ___ ___

TABLE 1
SNAP School Nurse Questionnaire
(Missouri Survey)

1. Are you currently practicing school nursing? ____ yes ____ no 7 ___
If no, what is your position? ______________________________ 8-9 ___ ___

2. Do you work in a school specializing in education of the handicapped? ____ yes ____ no 10 ___

3. My most advanced nursing educational preparation is: 11 ___
_____ A.D.
_____ Diploma
_____ B.S.
_____ M.S.
_____ Ph.D.
_____ Nurse Practitioner

4. Have you received special training in working with handicapped children? ____ yes ____ no 12 ___

5. How long have you been practicing school nursing? _____ years (fill in years) 13-14 ___ ___

6. Please write in an estimate of the number of students you serve. __________ ___ 15 ___ 16 ___ 17 ___ 18 ___ 19

7. Please write in an estimate of the number of handicapped students you serve in each of the areas listed below.

a. children who are legally deaf __________ 20-22 ___ ___ ___
b. children who are legally blind __________ 23-25 ___ ___ ___
c. children with speech and/or language problems __________ 26-28 ___ ___ ___
d. children with emotional and/or behavioral problems __________ 29-31 ___ ___ ___
e. children with specific learning disabilities __________ 32-34 ___ ___ ___
f. children with mental retardation __________ 35-37 ___ ___ ___
g. children with physical handicaps __________ 38-40 ___ ___ ___
h. other (please list what they are __________ 41-42 B B ___
____ 43-44 B B
____ 45-47 B B B
48-49 B B
50-52 B B B

8. Do you feel you have a clear understanding of the school nurse's role in carrying out the mandate of PL 94-142, The Education of Handicapped Children Act? ____ yes ____ no 53 ___

9. Please indicate by placing a check mark under either "yes" or "no" whether you do or do not feel competent to do the activities for handicapped students listed below.

	yes	no	
a. screening for problems in growth and development	_____	_____	54 ___
b. screening for vision problems	_____	_____	55 ___
c. screening for hearing problems	_____	_____	56 ___
d. screening for dental problems	_____	_____	57 ___
e. screening for speech and language problems	_____	_____	58 ___
f. assessing the mental status of a child	_____	_____	59 ___
g. assessing the neurological status of a child	_____	_____	60 ___
h. assessing nutritional and feeding problems of a child	_____	_____	61 ___

(over)

	yes	no	
i. interpreting educational and psychological test results	______	______	62 __
j. assessing and intervening in elimination problems	______	______	63 __
k. providing maintenance of skin and skin checks	______	______	64 __
l. teaching crutch walking	______	______	65 __
m. teaching wheelchair transfers	______	______	66 __
n. caring for decubitus ulcers	______	______	67 __
o. caring for a tracheostomy	______	______	68 __
p. doing passive range of motion exercises	______	______	69 __
q. administering a nasogastric feeding	______	______	70 __
r. supervising toileting procedures (bowel)	______	______	71 __
s. caring for a ileo loop	______	______	72 __
t. caring for a supra-pubic catheter	______	______	73 __
u. caring for an external urine collector	______	______	74 __
v. supervising clean intermittant catheterization	______	______	75 __
w. performing a urethral catheterization	______	______	76 __
x. monitoring a child with a respirator	______	______	77 __
y. care of a child who is convulsing	______	______	78 __
z. monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia)	______	______	79 __

10. Please indicate by placing a check mark under either "yes" or "no" whether you routinely perform the activities listed below.

Card 2 B
Col:

	yes	no	
a. Consultation and teaching of teachers about the needs of handicapped children	______	______	2 __
b. Teaching the other students about handicapping conditions in order to decrease negative attitudes toward them	______	______	3 __
c. Have you ever used these educational materials?			
1. What if You Couldn't (multi-media kit)	______	______	4 __
2. We Did It...So Can You (Teacher training program)	______	______	5 __
3. Like Me, Like You (film)	______	______	6 __
d. Teaching handicapped children good health practices	______	______	7 __
e. Teaching the parents of handicapped children about their child's handicap and the care necessary to maintain the child's health.	______	______	8 __
f. Creating nursing care plans for each handicapped child.	______	______	9 __
g. Participate in I.E.P. (Individualized Education Plan) conferences for handicapped students	______	______	10 __
(If yes, what percent of I.E.P. conferences that occur do you participate in?) ________			11-13 __ __ __
h. Supervision of a non-health personnel in administration of physical care to a handicapped child	______	______	14 __

11. Please indicate, by placing a check mark under either "yes" or "no" whether or not you feel satisfied with your knowledge in the areas listed below.

	Yes	no	
a. Knowledge of normal growth and development for the ages of children you provide care for.	______	______	15 __
b. Knowledge of the psychodynamic or emotional aspects of handicapping conditions as they affect the child and the family	______	______	16 __
c. Knowledge of how to use nursing process to create a nursing care plan for handicapped students	______	______	17 __

	yes	no	
d. Knowledge of principles of supervision and consultation as they could be used with other school personnel.	____	____	18 __
e. Knowledge of the process of counseling as it could be used with individuals, families and groups.	____	____	19 __
f. Knowledge of the principles of team development as they could be used in working with a team of school personnel.	____	____	20 __
g. Knowledge of current treatments (including medications) recommended for prevalent handicapping conditions.	____	____	21 __

(If "no", which conditions do you feel you need to know more about?) ____________________

____

____

12. If there were an opportunity for you to obtain additional education in working with children and adolescents who have handicapping conditions/developmental disabilities, would you be interested in (check all that apply):

___ self-instructional materials plus 3 days (at 4-6 week intervals) at selected sites 22 __

___ 3 hr. class 1 day weekly x 8 weeks 23 __

13. Do you have a school physician? ____ yes ____ no 24 __
If "yes", approximately how many hours per week does he/she work in the school(s)? ________ 25-26 __ __

14. In your opinion, how supportive of school nurses are each of the following groups or persons? (circle one response choice for each group or person listed).

	Extremely Supportive		Moderately Supportive		Not at all Supportive	
a) students	5	4	3	2	1	27 __
b) parents	5	4	3	2	1	28 __
c) teachers	5	4	3	2	1	29 __
d) special services personnel	5	4	3	2	1	30 __
e) school superintendent	5	4	3	2	1	31 __
f) school principals	5	4	3	2	1	32 __
g) school secretaries	5	4	3	2	1	33 __

15. Did you complete this questionnaire (check one): 34 __

____ in terms of your own opinions, activities, etc.

____ on behalf of several nurses in your district (if so, how many?________) 35-37 __ __ __

For school nurse workshops in general

16. I am willing to travel ___#___ miles. 38 ___

___ up to 50 ___ 50-100 ___ 100-150 ___ More than 150

17. I would prefer the workshops: 39 ___

___ Weekdays ___ Saturdays

18. I would prefer: 40 ___

___ one day ___ two days ___ three days

19. I would prefer: 41 ___

___ during school year ___ during summer

Regarding general issues

20. Are you evaluated? ____ yes ____ no 42 ___
If so, does your evaluation get reflected into salary increase? ___yes ___ no 43 ___

21. Does your district use an accident reporting form? ___ yes ___ no 44 ___
If so, who completes this form?

___ Nurse ___ Administrator 45 ___

Who does follow-up of accident? 46 ___

___ Nurse ___ Administrator

22. What is the number of students in your total population? __________ 47-50 ___ ___ ___ ___
What is the number of nurses? ______________ 50-52 ___ ___ ___

23. My salary range is: 53 ___

___ less than $10,000 ___$10,000-$15,000 ___$15,000-$20,000
___ $20,000-$25,000 ___ more than $25,000

Professional memberships you belong to

24. School Nurse Organization ___District ___ State ___ National 54 ___

Professional Nursing Organization ___District ___ State ___ National 55 ___
Education (Teachers) Organizations ___District ___ State ___ National 56 ___
School Health Association (ASHA) ___ 57 ___
Public Health Association ___ 58 ___

25. I have performed screenings for: 59 ___
___ Vision ___ Hearing ___ Scoliosis ___ Blood Pressure ___ Height/Weight 60 ___
What percent of these have you referred? _______ 61 ___

62 ___

63 ___

64-66 ___ ___ ___

Please write any further comments on the backside.

Thank you very much for participating in this survey. Please use the stamped, addressed envelope and return it to us as soon as possible.

TABLE 2

SUMMARY STATISTICS FOR SCHOOL NURSE ACHIEVEMENT PROGRAM

QUESTIONNAIRE Missouri, 1986 + National 1980

MISSOURI n = 121
National n = 834

Missouri results are given first; National results second in parenthesis.

A. Description of Position and Educational Preparation

	Percentages		
	Yes	No	Other[1]
1. Are you currently practicing school nursing?	82.6 (98.0)	9.9 (1.9)	7.4 (.1)
2. Do you work in a school specializing in education of the handicapped?	25.6 (23.6)	62.8 (72.5)	11.6 (3.8)
3. My most advanced educational preparation is:			
Associate Degree	9.9(5.0)		
Diploma	54.5(27.5)		
B.S.	16.5(51.6)		
M.S.	1.7(12.7)		
Ph.D.	.8(.1)		
Other	2.5(3.0)		
(Are you a Nurse Practitioner?)	2.5(4.9)		
4. Have you received special training in working with handicapped children?	9.1 (24.8)	76.0 (70.5)	12.4 (4.7)

	Years		
	Minimum to Maximum	Mean	S.D.
5. How long have you been practicing school nursing?	0 - 32 (0 - 35)	9.8 (9.1)	7.2 (7.0)

---

[1] Other: includes missing responses, yes-no both checked, question marks, not applicable, and "others do this".

TABLE 2...continued

B. Description of School Population

	Frequencies		
	Min. to Max.	Mean	S.D.
6. Please write in an estimate of the number of students you serve.	30 - 36,000 (12 - 30,000)	2073.9 (2136.5)	4707.6 (2387.1)

7. Please write in an estimate of the number of handicapped students you serve in each of the areas listed below:	Minimum to Maximum	Mean	S.D.	Average % of Total No. Served (n=834)
a. children who are legally deaf (n=662)	0 - 222 (0 - 120)	16.9 (3.2)	49.5 (9.2)	1.5 (.2)
b. children who are legally blind (n=674)	0 - 220 (0 - 300)	15.5 (2.3)	46.2 (13.4)	2.9 (.1)
c. children with speech and/or language problems (n=653	0 - 300 (0 - 1500)	36.2 (68.7)	45.1 (134.8)	8.5 (3.8)
d. children with emotional and/or behavioral problems (n=658)	0 - 454 (0 - 3200)	48.7 (43.0)	110.5 (136.8)	4.4 (2.6)
e. children with specific learning disabilities (n=667)	0 - 551 (0 - 1500)	81.5 (73.1)	125.9 (124.1)	10.3 (4.4)
f. children with mental retardation (n=666)	0 - 480 (0 - 1500)	27.6 (35.1)	62.6 (96.3)	8.9 (3.0)
g. children with physical handicaps (n=687)	0 - 390 (0 - 300)	23.7 (17.5)	53.3 (33.8)	6.3 (1.5)
h. other (n=51)	Not collected for Missouri (0 - 500)	(46.3)	(80.2)	(.1)

S.D. = Standard Deviation

TABLE 2....continued

C. Familiarity with P.L. 94-142

	PERCENTAGES		
	Yes	No	Other
8. Do you feel you have a clear understanding of the school nurse's role in carrying out the mandate of P.L. 94-142, The Education of Handicapped Children Act?	31.4 (42.7)	56.2 (52.5)	12.4 (4.9)
D. Perceived Competence			
9. Please indicate by placing a check mark under either "yes" or "no" whether you do or do not feel competent to do the activities for handicapped students listed below:			
a. screening for problems in growth and development	46.3 (62.9)	41.3 (31.9)	12.4 (5.5)
b. screening for vision problems	70.2 (88.1)	16.5 (9.6)	13.2 (2.3)
c. screening for hearing problems	62.0 (78.2)	23.1 (18.1)	14.9 (3.7)
d. screening for dental problems	43.8 (67.0)	41.3 (28.7)	14.9 (4.4)
e. screening for speech and language problems	7.4 (17.3)	81.0 (74.2)	11.6 (8.6)
f. assessing the mental status of a child	14.9 (18.6)	72.7 (73.0)	12.4 (8.4)
g. assessing the neurological status of a child	26.4 (21.1)	62.0 (72.3)	11.6 (6.6)
h. assessing nutritional and feeding problems of a child	52.9 (71.3)	36.4 (24.6)	10.7 (4.1)
i. interpreting educational and psychological test results	14.0 (23.3)	73.6 (71.0)	12.4 (4.7)
j. assessing and intervening in elimination problems	43.8 (66.7)	42.1 (27.9)	14.0 (5.5)
k. providing maintenance of skin and skin checks	66.2 (84.5)	20.7 (12.0)	13.2 (3.5)

TABLE 2....continued

D. Perceived Competence...continued

	PERCENTAGES		
	Yes	No	Other
l. teaching crutch walking	40.5 (61.8)	42.1 (33.8)	17.4 (4.5)
m. teaching wheelchair transfers	47.9 (60.0)	34.7 (35.1)	17.4 (4.9)
n. caring for decubitus ulcers	58.7 (76.1)	21.5 (19.8)	19.8 (4.0)
o. caring for a tracheostomy	42.1 (60.8)	37.2 (34.9)	20.7 (4.3)
p. doing passive range of motion exercises	55.4 (63.4)	27.3 (30.9)	17.4 (5.7)
q. administering a nasogastric feeding	52.9 (65.6)	29.8 (29.3)	17.4 (5.2)
r. supervising toileting procedures (bowel)	54.5 (73.9)	27.3 (21.7)	18.2 (4.4)
s. caring for a ileo loop	23.1 (39.9)	57.0 (55.0)	19.8 (5.0)
t. caring for a supra-pubic catheter	43.0 (58.2)	38.0 (37.1)	19.0 (4.8)
u. caring for an external urine collector	55.4 (76.0)	24.0 (19.5)	20.7 (4.4)
v. supervising clean intermittant catheterization	60.3 (75.5)	20.7 (20.4)	19.0 (4.0)
w. performing a urethral catheterization	59.5 (74.8)	21.5 (21.0)	19.0 (4.2)
x. monitoring a child with a respirator	17.4 (33.2)	64.5 (61.5)	18.2 (5.3)
y. care of a child who is convulsing	65.3 (86.6)	14.9 (8.4)	19.8 (5.1)
z. monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia)	4.1 (11.4)	70.2 (74.5)	25.6 (14.2)

TABLE 2...continued

E. Routinely Performed Activities

	PERCENTAGES		
	Yes	No	Other
10. Please indicate by placing a check mark under either "yes" or "no" whether you routinely perform the activities listed below:			
a. Consultation and teaching of teachers about the needs of handicapped children	38.0 (63.3)	46.3 (33.2)	15.7 (3.4)
b. Teaching the other students about handicapping conditions in order to decrease negative attitudes toward them	22.3 (47.1)	65.3 (49.2)	12.4 (3.6)
c. Have you ever used these educational materials:			
1. What If You Couldn't (multi-media kit)	4.1 (1.7)	84.3 (94.8)	11.6 (3.4)
2. We Did It..So Can You (teacher training program)	1.7 (1.6)	82.6 (91.8)	15.7 (6.6)
3. Like Me, Like You (film)	3.3 (6.5)	81.0 (88.0)	15.7 (5.5)
d. Teaching handicapped children good health practices	39.7 (58.8)	47.9 (37.4)	12.4 (3.9)
e. Teaching the parents of handicapped children about their child's handicap and the care necessary to maintain the child's health	18.2 (35.9)	65.3 (58.9)	16.5 (5.2)
f. Creating nursing care plans for each handicapped child	13.2 (26.5)	71.1 (68.8)	15.7 (4.7)
g. Participate in I.E.P. (Individualied Education Plan) conferences for handicapped	30.6 (48.8)	54.5 (45.0)	14.9 (6.2)
h. Supervision of a non-health personnel in administration of physical care to a handicapped child	17.4 (39.1)	65.3 (56.8)	17.4 (4.1)

Page 5 of 9 pages

TABLE 2...continued

E. Routinely Performed Activities...continued

If "yes" is indicated to participation in I.E.P. conferences, what percent of I.E.P. conferences that occur do you participate in?

	Mean Percentage	S.D.
1. Based on all respondents	Not calculated for Missouri 25.3	38.5
2. Based on "yes" respondents only	73.9 (53.8)	159.2 (40.1)

F. Knowledge Needs

	PERCENTAGES		
11. Please indicate, by placing a check mark under either "yes" or "no" whether or not you feel satisfied with your knowledge in the areas listed below:	Yes	No.	Other
a. Knowledge of normal growth and development for the ages of children you provide care for	66.1 (78.3)	18.2 (18.8)	15.7 (2.8)
b. Knowledge of the psychodynamic or emotional aspects of handicapping conditions as they affect the child/family	26.4 (38.8)	58.7 (57.7)	14.9 (3.5)
c. Knowledge of how to use nursing process to create a nursing care plan for handicapped students	30.6 (43.3)	52.9 (52.8)	16.5 (3.9)
d. Knowledge of principles of supervision/consultation as they could be used with other school personnel	27.3 (55.0)	56.2 (41.2)	16.5 (3.7)
e. Knowledge of the process of counseling as it could be used with individuals, families and groups	24.0 (51.2)	60.3 (44.6)	15.7 (4.2)
f. Knowledge of the principles of team development as they could be used in working with a team of school personnel	32.2 (52.8)	51.2 (43.4)	16.5 (3.8)
g. Knowledge of current treatments (including medications) recommended for prevalent handicapping conditions	26.4 (38.7)	56.2 (54.3)	17.4 (7.0)

TABLE 2....continued

G. Educational Alternatives

	PERCENTAGES		
	Yes	No	Other
12. If there were an opportunity for you to obtain additional education in working with children/adolescents who have handicapping conditions and/or developmental disabilities, would you be interested in:	NATIONAL DATA NOT COMPARIABLE.		
self-instructional materials + 3 days	43.8	39.7	16.5
3 hr class 1 day weekly x 8 weeks	42.1	39.7	18.2

H. School Physician

	Yes	No	Other
13. Do you have a school physician?	11.6 (29.9)	73.6 (67.6)	14.9 (2.5)

	Mean Hours	S.D.
If yes, approximately how may hours per week does he/she work in the school?	6.4 (5.7)	18.0 (9.6)

I. Support Systems

(Responses given on a 5-point scale)

14. In your opinion, how supportive of school nurses are each of the following groups/persons?	Mean	S.D.
a. school secretaries	4.327 (4.129)	.907 (.999)
b. special services personnel	3.980 (4.050)	1.02 (.941)
c. school principals	4.093 (3.984)	.902 (.999)
d. students	4.130 (3.971)	.872 (.924)
e. teachers	3.990 (3.934)	.886 (.981)
f. parents	3.810 (3.732)	.849 (.873)
g. school superintendent	3.561 (3.604)	1.094 (1.208)

TABLE 2 ...continued

PERCENTAGES

	Yes	No	Other
15. Did you complete this questionnaire:			
a. in terms of your own opinions, activities, etc.	76.0 (92.2)	7.4 (5.9)	16.6 (1.9)
b. on behalf of several nurses in your district	7.4 (7.0)	76.0 (90.9)	16.6 (2.2)
	Number of Persons .		
	Minimum - Maximum	Mean	S.D.
If so, how many?	2 - 36 (1 - 25)	9.3 (5.2)	10.5 (4.2)

ADDTIONAL QUESTIONS:

16. Miles willing to travel

0 - 50 miles	51.2%
50 -100 miles	21.5%
100 -150 miles	5.0%
over 150 miles	2.5%
missing	19.8%

17. Prefer Weekday/Saturdays

Weekdays	68.6%
Saturdays	12.4%
Either	1.7%
Missing	17.4%

18. Prefer 1-2-3 days

1 day	55.4%
2 days	21.5%
3 days	5.8%
missing	17.4%

19. Prefer school year or summer

School year	62.8%
Summer	17.4%
Missing	19.8%

20. Evaluation

yes	52.9%
no	29.8%
Missing	17.4%

20a. Reflected in salary?

yes	18.2%
no	43.0%
Missing	38.8%

21. Use accident form?

Yes	70.2%
No	8.3%
Missing	21.5%

21a. Who completes accident form?

Nurse	51.2%
Admin.	12.4%
Other	6.6%
Missing	29.8%

21b. Who does follow-up?

Nurse	57.0%
Admin.	9.9%
Other	7.4%
Missing	25.6%

22. Number of students in your total population

	Number of nurses
$\bar{x}$ = 2455.1	x = 9.88%
sd = 2412.01	sd = 21.59%

23. Salary < 10,000 = 15.7%
10,000-15,000 = 34.7%
15,000-20,000 = 27.3%
20,000-25,000 = 7.4%
> 25,000 = 1.7%
Missing = 13.2%

ADDITIONAL QUESTIONS (continued)

24a. Belong to School Nurse Organization

District	18.2%
State	3.3%
National	1.1%
Combination	26.4%
Missing	51.2%

24b. Belong to Professional Nurse Organization

District	6.6%
State	9.1%
National	1.7%
Combination	4.1%
Missing	78.5%

24c. Belong to Educational Organization

District	8.3%
State	1.7%
National	1.7%
Combination	8.3%
Missing	80.2%

24d. Belong to ASHA

Yes	5.8%
No	66.1%
Missing	28.1%

24e. Belong to Public Health Association

Yes	12.4%
No	59.5%
Missing	28.1%

25. Screening

	% yes	% no	% missing
Vision	86	2.5	11.6
Hearing	7.9	10.7	12.4
Scoliosis	77.7	10.7	11.6
Blood pressure	64.5	22.3	13.2
Height/weight	81.0	6.6	12.4

Percent referred MEAN 18.63% Standardized deviation 37.95%

TABLE #

Comments on SNAP School Nurse Questionnaire

1. In reference to question #9, our school district has a speech therapist who does the hearing screenings, and screenings for speech and language problems.

We also have a Special Services Director who is responsible for assessing' the mental status of students, and interpreting educational and psychological test results.

Dental screening, when it is done, is done by dentists.

Question #6 and question 22 - I did not give the same answer, because, through the year, a number of students will transfer in and out, so the total # of students worked with during the year, will be greater than the current enrollment at any given time.

In the several questions that refer to nursing care plans, I would hope you are not advocating writing nursing care plans for all school students. We are already spending lots of time on paper work-keeping immunization histories, recording screenings, etc. Most school districts are not going to want to spend the money, hiring a secretary for Health Services. Money is a scarce item in most districts - and districts are having to spend more and more on personnel just to do the paper work - let's not allow education (the primary reason children are in school) to become the victim of too much paper work --

2.

While I feel very comfortable with the handicapped students in my schools, I do like to keep up on current trends and new treatments, tests, etc. As a result I would really enjoy any and all workshops in every area covered in the survey. Even routine screenings can sometimes be done in a more efficient manner, so even we "Veterans" can always use some refresher skills.

Also, I am so pleased to see that Missouri is going to participate in the SNAP program. I was on the original committee quite a few years ago to be a pilot state for "snap". Unfortunately we were not chosen at that time. Hooray for now. I still feel it's a Great program and I am eager to be a part of it.

Thank you for letting me be a participant in the survey. Hope to see you soon. Keep up the good work.

3. I could benefit from general refresher for handicapped.

4. This program sounds very interesting. I would be very interested in attending a course. Please send me any information you have as it becomes available.

5. We have three nurses in this county (including me) of which we all participate in school health screenings throughout the year. We have 11 schools including public and parochial. Two nurses are full time and one nurse is 3/5 time. Thank you.

6. I am a Licensed Practical Nurse working as a health room aide because I like the hours and days off.

I am not allowed to refer any screening results on my own they must be rechecked by an R.N.

7. I feel my area of the best education is one of counseling with families concerning their neglect and acceptance of their "handicap"--

Also one of when to encourage more self-help and more exercise!

8. I am working with 10, 11 and 12th graders (some 8th & 9th) there are many times that I feel a need to just talk with other nurses about the emotional needs of the young adults that I work with. Their problems are truly overwhelming, there are so many distraught and disturbed students. The pregnancy rate is on a rapid increase. Suicide, STD's broken homes, poverty are problems that we are all faced with daily yet when we meet, I feel all these issued are brushed aside. I would like to know how other nurses handle these daily problems and if there is an answer. There are times, at some of our state meetings that I feel we've lost the reality of it all.

9. Total # of students = total in Vernon Co., however, we are only in charge of screenings in the 5 county schools. The Nevada schools employ 2 health aides that do their screening. They do not employ a "school" nurse. We screen approximately 750 of this total.

10. Camdenton R/3 has 2 full time school nurses. Camden Co Nursing Service does outlying school - hearing, vision, and scoliosis. Approx. 800 students - however, we screen K - 5 grade for hearing and vision, screen 5 through 9 for scoliosis.

11. Many of the services are not provided by the nurse. We have an occupational therapist, 2 physical therapists, 2 speech teachers, 1 part-time social worker, 1 part-time psychological examiner.

12. I work part-time as a MCH Nurse for the County Health Dept. I only assist the local School Nurse with screening clinics and immunizations as it pertains to our local contract for school health, therefore I did not complete what was not applicable for my job.

13. I have 6 schools several miles apart in this area. I am not in any one school all the time so part of my job is training local employees to handle situations.

The speech department does the hearing screening in my schools.

14. I assist the school when asked to deal with some problems but rarely or never do I assist with handicapped children. We have very few handicapped children and those that are the parents and special services personnel care for.

I have completed this survey according to my knowledge but with the way we presently are associated with the school I'm not sure how much my gaining knowledge would be of benefit to them.

15. I am a Public Health Nurse with several little schools plus 1 medium sized school in my county who do not have school nurses. I do that work along with the other things I do.

16. I don't think this questionnaire is appropriate for me. I work part time in a private school. No handicap kids at all.

17. I am a maternal/child nurse for Randolph Co. Health Dept. I am responsible for 5 rural schools as far as doing the necessary screenings that need to be done and I help the school personnel with any questions they might have.

18. I have more understanding of S-N role after attending the workshop given this past year by the state dept. of Health & School Nurs. I think it should be given to all new school nurses. Also their new hand book for S. nurses is very helpful.

A course which would last a week in the summer & be given several different times would be good.

One I would like to see (Have) is one on E.N.T., ears, nose & throat. Also a short one on the different types of tests which are given wisc, ect.

Have heard several views on aids:

19. I work 9 hours/wk for K-12 ($4300. (86-7 yr)

20. Because we have a Special School District, most handicapped children are in their buildings, therefore we do not have many such concerns as listed.

THE SNAP SCHOOL NURSE SURVEY FOR NEW JERSEY

(Summary of Results)

Georgia L. Heiberger, RNC, PNP

The School Nurse Achievement Program (SNAP) of the University of Colorado recently completed a mailed-questionnaire survey of school nurses in New Jersey . The purpose of the survey was to determine whether SNAP would be beneficial to these nurses. The questionnaire used in the New Jersey survey was identical to one used to obtain a national sample of 4,000 school nurses in 1980**. This report will include both the current New Jersey survey and the 1980 national one for comparison purposes. A copy of the questionnaire (Table I) will start on page 6 of this report.

The school nurse survey was designed to delineate the following type of information:

1. a profile of the inservice needs of school nurses related to handicapped children and adolescents;
2. an analysis of the types of handicapping conditions requiring special attention at school and a modified school health program;
3. a task inventory of school nurse activites performed for children and adolescents eligible for assistance from the Handicapped Children's Educational Act and the problems encountered;
4. the ratio of nurses to pupils; and
5. evidence of school and community support for school nurses.

The Sample

A random smaple of district superintendents was selected. Surveys were sent to the superintendents asking them to select one nurse from their district to complete and return the survey. A total of 200 questionnaires was distributed to school nurses in New Jersey in May,1986. One hundred forty-seven (73%) nurses responded by July, 1986; 145 of these respondents (or 97.9%) stated that they were currently working as school nurses.

**Since this survey was a duplicate of the one sent nationwide in 1980, and the findings were very similar in many cases to the earlier study, much of the explanatory material in this report was taken from the earlier report, "The SNAP School Nurse Survey" (May, 1980): Summary of Procedures and Results" written by Nancy K.O. Hester, Laura D. Goodwin, and Judith B. Igoe.

The Results

Summary statistics consisting of percentages, means, and standard deviations were computed. These statistics (Table 2) start on page 9.......... and are divided into ten subparts according to the questionnaire:

1. a description of position and educational preparation;
2. a description of the school population;
3. familiarity with PL 94-142;
4. perceived competence as related to activities with handicapped children;
5. routinely performed activities (with handicapped children);
6. knowledge needs;
7. educational alternatives;
8. school physician;
9. support system;
10. a "final question" which refers to the method of answering the questionnaire.

It will be noted that each part of Table 2 has two responses listed. The first response is the result of the New Jersey survey; the second response, in parentheses, is the result of the 1980 national survey. The survey was designed to obtain five specific types of information and the following results will describe that information. References will be made to section numbers in the questionnaire for ease of interpretation.

I. A Profile of the Inservice Needs of School Nurses related to Handicapped Children and Adolescents.

Special training in working with handicapped children had been received by only 27.4% of the respondents (Section A, #4), although more than half of them (63.9%) expressed an understanding of the school nurse's role in carrying out the mandate of PL 94-142 (Sec. C-8). These figures contrast interestingly with the 1980 national figures, in which only 42.7% of the school nurses expressed an understanding of the nurse's role in carrying out PL 94-142. This indicates that the past six years have seen definite growth in the school nurses' ability to function under PL 94-142. In relation to perceived competence (Sec. D) the activities the school nurses felt the least competent to perform were these: screening for speech and language problems (26.5%); assessing the mental status of a child (23.8%); assessing the neurological status of a child (19.8%); and monitoring a child for signs and symptoms of autonomic hyperreflexia (19.8%). These statistics are similar to the national responses, with the school nurses feeling least competent to monitor a child for signs and symptoms of autonomic hyperreflexia (11.4%), to screen for speech and language problems (17.3%), to assess the mental status of a child (18.6%), and to assess the neurological status of a child (21.1%).

The New Jersey school nurses scored higher than the national survey in all areas of knowledge satisfaction (Sec. F). The only parts of Section F in which fewer than 50% expressed satisfaction were the following: knowledge of current treatments (including medications) recommended for prevalent handicapping conditions (44.9%); knowledge of how to use nursing process to create a nursing care plan for handicapped students (47.6%); and knowledge of the psychodynamic or emotional aspects of handicapping conditions as they affect the child/family (49.7%). The nurses in the 1980 national survey also indicated less satisfaction with their knowledge in the same areas, but their expressed satisfaction was much lower: knowledge of current treatments (38.7%); knowledge of how to use nursing process (43.3%); and knowledge of psychodynamic aspects (38.8%). Again, these statistics indicate an increase in the school nurses' knowledge during the past six years.

The last section concerned with inservice needs was G, which explored desirable educational alternatives. The types of educational offerings most preferred by the New Jersey school nurses were these: self-instructional materials (55.7%); a Saturday program (48.3%); and a four-month educational program (46.3%). The SNAP approach, which is a combination of self-instructional materials and three all-day workshops, might be attractive to the New Jersey school nurses.

2. An Analysis of the Types of Handicapping Conditons requiring Special Attention at School and a modified school health program.

Section B, Question 7, provided some information about handicapping conditions. The results are presented in two ways: 1) means and standard deviations of the numbers of children cited as having each handicap, based on the responses of nurses who did not leave the item blank; and 2) average percentage of students with each handicap, calculated by dividing the numbers given by the total number of students served by each nurse (Sec. B-6). The two different ways of examining the results are provided because of the problem of blank or missing responses; it could not be determined whether, or when, blank responses meant the same as zero. For the percentages, blank responses were equated to zero, while for the means and standard deviations the blank responses were not included. The most prevalent handicapping conditions listed in Section B were specific learning disabilities (4.8%) and speech and/or language problems (3.8%). The condition noted least was legal blindness (.06%). These percentages are almost identical to those in the 1980 national survey, with specific learning disabilities (4.4%) being the most prevalent, speech and/or language problems (3.8%--identical score) being the second most prevalent, and legal blindness being the least prevalent (.1%).

3. A Task Inventory of School Nurse Activities performed for Children and Adolescents Eligible for Assistance from the Handicapped Children's Act and the problems encountered.

Both Sections D and E are concerned with this topic. Section D was discussed under inservice needs and gave information about clinical care and problems encountered during clinical activities. Section E focused on the educational activitiy nurses provided for handicapped students. The most frequently performed educational function was teaching handicapped children good health practices (65.3%), followed by consultation and teaching of teachers about the needs of handicapped students (61.2%) and by teaching the other students about handicapping conditions (57.1%). Consultation and teaching of teachers was the function most often performed by nurses in the national survey (63.3%), followed by teaching handicapped children good health practices (58.8%), and by teaching other students (47.1%). Unfortunately, only 32.6% of the New Jersey school nurses participated in I.E.P. conferences, well below the national average of 48.8% of the school nurses. Perhaps the child study teams have not been convinced of the usefulness and importance of a school nurse's participation in I.E.P. conferences, and perhaps the nurses are not routinely invited to attend the meetings.

4. Ratio of Nurses to Pupils.

The New Jersey school nurses served an average of 934.4 students (Sec.B-6); school nurses in the 1980 survey served an average of 2,136.6 students. This slight improvement in the nurse-student ratio should allow school nurses a few more minutes to perform their important functions. Item number 2, listed earlier in this report, summarized the next part of Section B which concerns the number of children with various handicapping conditions. As previously mentioned, the percentages are probably conservative since the blank responses here were scored as zero. Therefore, those nurses who left an item blank because they could not give an estimate were condsidered to have no students with that condition.

5. Evidence of School and Community Support for School Nurses.

Section I was concerned with the support systems available for school nurses in New Jersey. The responses were given on a five-point scale with 5 meaning "extremely supportive" and 1 meaning "not at all supportive." The support felt by the nurses were generally quite high, with all scores being above 4 except for parental support, which was rated 3.925. Interestingly enough, the nurses indicated that school secretaries were the most supportive (4.463), followed by school principals at 4.373. The New Jersey school nurses reported stronger support than those in the national survey in all areas. In addition, a much greater percentage reported that they had a school physician--95.2% in New Jersey compared to 29.9% in the national survey.

SUMMARY

The school nurses in New Jersey were similar to those in the 1980 national survey in their desire for additional education and training to assist them in their work with handicapped children. The areas in which they felt their competence could be increased were in assessing the neurological status and the mental status of a child, in speech and/or language screening, and in monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia). The nurses indicated a need for more knowledge about current treatments for handicapping conditions, in the use of the nursing process to create a nursing care plan for handicapped students, and of the psychodynamic or emotional aspects of handicapping conditions.

The respondents were willing to obtain additional education in order to more effectively work with handicapped students, and were most interested in self-instructional materials, workshops (especially on Saturdays), and four-month educational programs.

FOR CODING ONLY
Col.
Card 1 A

ID# 2-4 ___ ___ ___

TABLE 1

SNAP School Nurse Questionnaire

(New Jersey Survey)

1. Are you currently practicing school nursing? ____ yes ____ no 5 ___
If no, what is your position? ______________________________ 6-7 ___ ___

2. Do you work in a school specializing in education of the handicapped? ____ yes ____ no 8 ___

3. My most advanced educational preparation is: 9 ___

____ B.A. (specify area: ________________)
____ B.S. (specify area: ________________)
____ B.S.N.
____ M.S.
____ Ph.D.

3a. Are you a school nurse practitioner? ____ yes ____ no 10 ___
3b. Are you a certified school nurse? ____ yes ____ no 11 ___

4. Have you received special training in working with handicapped children? ____ yes ____ no 12 ___

5. How long have you been practicing school nursing? ______ years (fill in years) 13-14 ___ ___

6. Please write in an estimate of the number of students you serve. __________ ___ ___ ___ ___ ___
15 16 17 18 19

7. Please write in an estimate of the number of handicapped students you serve in each of the areas listed below.

a. children who are legally deaf __________ 20-22 ___ ___ ___
b. children who are legally blind __________ 23-25 ___ ___ ___
c. children with speech and/or language problems __________ 26-28 ___ ___ ___
d. children with emotional and/or behavioral problems __________ 29-31 ___ ___ ___
e. children with specific learning disabilities __________ 32-34 ___ ___ ___
f. children with mental retardation __________ 35-37 ___ ___ ___
g. children with physical handicaps __________ 38-40 B B B
h. other (please list what they are ______________________________ 41-42 B B
______________________________ 43-44 B B
______________________________ 45-47 B B B
48-49 B B
50-52 B B B

8. Do you feel you have a clear understanding of the school nurse's role in carrying out the mandate of PL 94-142, The Education of Handicapped Children Act? ____ yes ____ no 53 ___

9. Please indicate by placing a check mark under either "yes" or "no" whether you do or do not feel competent to do the activities for handicapped students listed below.

	yes	no	
a. screening for problems in growth and development	______	______	54 ___
b. screening for vision problems	______	______	55 ___
c. screening for hearing problems	______	______	56 ___
d. screening for dental problems	______	______	57 ___
e. screening for speech and language problems	______	______	58 ___
f. assessing the mental status of a child	______	______	59 ___
g. assessing the neurological status of a child	______	______	60 ___
h. assessing nutritional and feeding problems of a child	______	______	61 ___

	yes	no		
i. interpreting educational and psychological test results			62	
j. assessing and intervening in elimination problems			63	
k. providing maintenance of skin and skin checks			64	
l. teaching crutch walking			65	
m. teaching wheelchair transfers			66	
n. caring for decubitus ulcers			67	
o. caring for a tracheostomy			68	
p. doing passive range of motion exercises			69	
q. administering a nasogastric feeding			70	
r. supervising toileting procedures (bowel)			71	
s. caring for a ileo loop			72	
t. caring for a supra-pubic catheter			73	
u. caring for an external urine collector			74	
v. supervising clean intermittant catheterization			75	
w. performing a urethral catheterization			76	
x. monitoring a child with a respirator			77	
y. care of a child who is convulsing			78	
z. monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia)			79	

10. Please indicate by placing a check mark under either "yes" or "no" whether you routinely perform the activities listed below.

Card 2 B
Col:

	yes	no		
a. Consultation and teaching of teachers about the needs of handicapped children			2	
b. Teaching the other students about handicapping conditions in order to decrease negative attitudes toward them			3	
c. Have you ever used these educational materials?				
1. What if You Couldn't (multi-media kit)			4	
2. We Did It...So Can You (Teacher training program)			5	
3. Like Me, Like You (film)			6	
d. Teaching handicapped children good health practices			7	
e. Teaching the parents of handicapped children about their child's handicap and the care necessary to maintain the child's health.			8	
f. Creating nursing care plans for each handicapped child.			9	
g. Participate in I.E.P. (Individualized Education Plan) conferences for handicapped students			10	
(If yes, what percent of I.E.P. conferences that occur do you participate in?) ________			11-13	___ ___ ___
h. Supervision of a non-health personnel in administration of physical care to a handicapped child			14	

11. Please indicate, by placing a check mark under either "yes" or "no" whether or not you feel satisfied with your knowledge in the areas listed below.

	Yes	no		
a. Knowledge of normal growth and development for the ages of children you provide care for.			15	
b. Knowledge of the psychodynamic or emotional aspects of handicapping conditions as they affect the child and the family			16	
c. Knowledge of how to use nursing process to create a nursing care plan for handicapped students			17	

	yes	no		
d. Knowledge of principles of supervision and consultation as they could be used with other school personnel.	____	____	18	__
e. Knowledge of the process of counseling as it could be used with individuals, families and groups.	____	____	19	__
f. Knowledge of the principles of team development as they could be used in working with a team of school personnel.	____	____	20	__
g. Knowledge of current treatments (including medications) recommended for prevalent handicapping conditions.	____	____	21	__

(If "no", which conditions do you feel you need to know more about?) ________________________________

____

____

12. If there were an opportunity for you to obtain additional education in working with children and adolescents who have handicapping conditions/ developmental disabilities, would you be interested in (check all that apply):

__ Self-instructional materials
__ two-day workshop
__ 4-month educational program
__ Continuing education
__ Graduate credits

__ 2-hours weekly for 15 weeks .... 22-23 __ __
__ day program .... 24-25 __ __
__ evening program .... 26-27 __ __
__ Saturday program .... 28-29 __ __
__ Other (explain on backside) .... 30-31 __ __

13. Do you have a school physician? ____ yes ____ no 32 __
If "yes", approximately how many hours per week does he/she work in the school(s)? ________ 33-34 __ __

14. In your opinion, how supportive of school nurses are each of the following groups or persons? (circle one response choice for each group or person listed).

	Extremely Supportive		Moderately Supportive		Not at all Supportive		
a) students	5	4	3	2	1	35	__
b) parents	5	4	3	2	1	36	__
c) teachers	5	4	3	2	1	37	__
d) special services personnel	5	4	3	2	1	38	__
e) school superintendent	5	4	3	2	1	39	__
f) school principals	5	4	3	2	1	40	__
g) school secretaries	5	4	3	2	1	41	__

15. Did you complete this questionnaire (check one): 42 __

____ in terms of your own opinions, activities, etc.
____ on behalf of several nurses in your district (if so, how many?________) 43-45 __ __ __

16. Comments:

Thanks very much for participating in this survey. Please use the stamped, dressed envelope and return it to us as soon as possible.

TABLE 2

SUMMARY STATISTICS FOR SCHOOL NURSE ACHIEVEMENT PROGRAM QUESTIONNAIRE - KANSAS, 1986 and NATIONAL, 1980 DATA

New Jersey results are given first: New Jersey N = 147
National results are second, in parentheses; National N = 834

A. Description of Position and Educational Preparation

	Percentages		
	Yes	No	Other[1]
1. Are you currently practicing school nursing?	97.9 (98.0)	2.1 (1.9)	-- (.1)
2. Do you work in a school specializing in education of the handicapped?	14.3 (23.6)	82.3 (72.5)	3.4 (3.8)
3. My most advanced educational preparation is:		New Jersey Only	
Associate Degree	- (5.0)	B.A.	44.8%
Diploma	- (27.5)	B.S.N.	17.7%
B.S.	9.5 (51.6)	M.Ed.	2.4%
M.S.	10.2 (12.7)	R.N.	1.0%
Ph.D.	- (.1)	M.A.	2.4%
Other	12.9 (3.0)	Certified school Nurse	94.6%
School Nurse Practitioner	4.72 (4.9)		
4. Have you received special training in working with handicapped children?	27.4 (24.8)	64.7 (70.5)	7.9 (4.7)

	Years		
	Minimum to Maximum	Mean	S.D.
5. How long have you been practicing school nursing?	1 - 32 (0 - 35)	13.2 (9.1)	7.07 (7.0)

---

[1] Other: includes missing responses, yes-no both checked, question marks, not applicable, and "others do this".

TABLE 2...continued

B. Description of School Population

6. Please write in an estimate of the number of students you serve.	Frequencies Min. to Max.	Mean	S.D.
	45 - 20,000 (12 - 30,000)	934.4 (2136.5)	2453.8 (2387.1)

N=133,620 (N=834)

7. Please write in an estimate of the number of handicapped students you serve in each of the areas listed below:	Minimum to Maximum	Mean	S.D.	Average % of Total No. Served
a. children who are legally deaf (n=662) n=189	0 - 60 (0 - 120)	1.5 (3.2)	6.8 (9.2)	.14 (.2)
b. children who are legally blind (n=674)n=86	0 - 15 (0 - 300)	.7 (2.3)	1.7 (13.4)	.06 (.1)
c. children with speech and/or language problems (n=653) n=5,092	0 - 820 (0 - 1500)	38 (68.7)	96.6 (134.8)	3.8 (3.8)
d. children with emotional and/or behavioral problems (n=658) n=2,689	0 - 490 (0 - 3200)	21.7 (43.0)	49.1 (136.8)	2.0 (2.6)
e. children with specific learning disabilities (n=667) n=6,355	0 - 500 (0 - 1500)	49.6 (73.1)	70.1 (124.1)	4.8 (4.4)
f. children with mental retardation (n=666) n=948	0 - 140 (0 - 1500)	8.2 (35.1)	20.8 (96.3)	.7 (3.0)
g. children with physical handicaps (n=687)	0 (0 - 300)	0 (17.5)	0 (33.8)	0 (1.5)
h. other (n=51)	0 (0 - 500)	0 (46.3)	0 (80.2)	0 (.1)

S.D. = Standard Deviation

TABLE 2....continued

C. Familiarity with P.L. 94-142

	PERCENTAGES		
	Yes	No	Other
8. Do you feel you have a clear understanding of the school nurse's role in carrying out the mandate of P.L. 94-142, The Education of Handicapped Children Act?	63.9 (42.7)	27.3 (52.5)	8.8 (4.9)
D. Perceived Competence			
9. Please indicate by placing a check mark under either "yes" or "no" whether you do or do not feel competent to do the activities for handicapped students listed below:			
a. screening for problems in growth and development	80.9 (62.9)	17.6 (31.9)	1.5 (5.5)
b. screening for vision problems	94.5 (88.1)	5.4 (9.6)	.1 (2.3)
c. screening for hearing problems	95.9 (78.2)	4.0 (18.1)	.1 (3.7)
d. screening for dental problems	61.9 (67.0)	36.1 (28.7)	2.0 (4.4)
e. screening for speech and language problems	26.5 (17.3)	72.1 (74.2)	1.4 (8.6)
f. assessing the mental status of a child	23.8 (18.6)	73.5 (73.0)	2.7 (8.4)
g. assessing the neurological status of a child	19.8 (21.1)	77.5 (72.3)	2.7 (6.6)
h. assessing nutritional and feeding problems of a child	71.4 (71.3)	27.2 (24.6)	1.4 (4.1)
i. interpreting educational and psychological test results	28.6 (23.3)	68.0 (71.0)	3.4 (4.7)
j. assessing and intervening in elimination problems	76.2 (66.7)	21.8 (27.9)	2.0 (5.5)
k. providing maintenance of skin and skin checks	92.5 (84.5)	5.5 (12.0)	2.0 (3.5)

TABLE 2....continued

D. Perceived Competence...continued

	PERCENTAGES		
	Yes	No	Other
l. teaching crutch walking	71.4 (61.8)	25.9 (33.8)	2.7 (4.5)
m. teaching wheelchair transfers	68.0 (60.0)	30.6 (35.1)	1.4 (4.9)
n. caring for decubitus ulcers	76.2 (76.1)	21.1 (19.8)	2.7 (4.0)
o. caring for a tracheostomy	57.1 (60.8)	39.5 (34.9)	3.4 (4.3)
p. doing passive range of motion exercises	65.9 (63.4)	31.4 (30.9)	2.7 (5.7)
q. administering a nasogastric feeding	67.3 (65.6)	30.0 (29.3)	2.7 (5.2)
r. supervising toileting procedures (bowel)	85.7 (73.9)	12.9 (21.7)	1.4 (4.4)
s. caring for a ileo loop	46.2 (39.9)	51.1 (55.0)	2.7 (5.0)
t. caring for a supra-pubic catheter	65.3 (58.2)	32.0 (37.1)	2.7 (4.8)
u. caring for an external urine collector	85.7 (76.0)	11.6 (19.5)	2.7 (4.4)
v. supervising clean intermittant catheterization	78.9 (75.5)	18.4 (20.4)	2.7 (4.0)
w. performing a urethral catheterization	78.2 (74.8)	19.1 (21.0)	2.7 (4.2)
x. monitoring a child with a respirator	31.9 (33.2)	64.7 (61.5)	3.4 (5.3)
y. care of a child who is convulsing	87.8 (86.6)	9.5 (8.4)	2.7 (5.1)
z. monitoring a child for signs and symptoms of autonomic hyperreflexia (dysreflexia)	19.8 (11.4)	69.3 (74.5)	10.9 (14.2)

TABLE 2...continued

E. Routinely Performed Activities

	PERCENTAGES		
	Yes	No	Other
10. Please indicate by placing a check mark under either "yes" or "no" whether you routinely perform the activities listed below:			
a. Consultation and teaching of teachers about the needs of handicapped children	61.2 (63.3)	37.4 (33.2)	1.4 (3.4)
b. Teaching the other students about handicapping conditions in order to decrease negative attitudes toward them	57.1 (47.1)	40.2 (49.2)	2.7 (3.6)
c. Have you ever used these educational materials:			
1. What If You Couldn't (multi-media kit)	2.7 (1.7)	92.5 (94.8)	4.8 (3.4)
2. We Did It..So Can You (teacher training program)	- (1.6)	91.2 (91.8)	8.8 (6.6)
3. Like Me, Like You (film)	10.8 (6.5)	83.8 (88.0)	5.4 (5.5)
d. Teaching handicapped children good health practices	65.3 (58.8)	32.7 (37.4)	2.0 (3.9)
e. Teaching the parents of handicapped children about their child's handicap and the care necessary to maintain the child's health	33.3 (35.9)	64.7 (58.9)	2.0 (5.2)
f. Creating nursing care plans for each handicapped child	22.4 (26.5)	74.2 (68.8)	3.4 (4.7)
g. Participate in I.E.P. (Individualied Education Plan) conferences for handicapped	32.6 (48.8)	56.5 (45.0)	10.9 (6.2)
% attend	0- 100%	Mean=47.1	
h. Supervision of a non-health personnel in administration of physical care to a handicapped child	33.3 (39.1)	64.7 (56.8)	2.0 (4.1)

TABLE 2...continued

E. Routinely Performed Activities...continued

If "yes" is indicated to participation in I.E.P. conferences, what percent of I.E.P. conferences that occur do you participate in?

	Mean Percentage	S.D.
1. Based on all respondents	47.1 (25.3)	68.7 (38.5)
2. Based on "yes" respondents only	61.2 (53.8)	70.7 (40.1)

F. Knowledge Needs

	PERCENTAGES		
	Yes	No.	Other
11. Please indicate, by placing a check mark under either "yes" or "no" whether or not you feel satisfied with your knowledge in the areas listed below:			
a. Knowledge of normal growth and development for the ages of children you provide care for	90.4 (78.3)	9.5 (18.8)	.1 (2.8)
b. Knowledge of the psycho-dynamic or emotional aspects of handicapping conditions as they affect the child/family	49.7 (38.8)	50.3 (57.7)	- (3.5)
c. Knowledge of how to use nursing process to create a nursing care plan for handicapped students	47.6 (43.3)	51.0 (52.8)	1.4 (3.9)
d. Knowledge of principles of supervision/consultation as they could be used with other school personnel	55.7 (55.0)	39.5 (41.2)	4.8 (3.7)
e. Knowledge of the process of counseling as it could be used with individuals, families and groups	52.4 (51.2)	44.2 (44.6)	3.4 (4.2)
f. Knowledge of the principles of team development as they could be used in working with a team of school personnel	58.6 (52.8)	38.7 (43.4)	2.7 (3.8)
g. Knowledge of current treatments (including medications) recommended for prevalent handicapping conditions	44.9 (38.7)	50.3 (54.3)	4.8 (7.0)

TABLE 2....continued

G. Educational Alternatives

PERCENTAGES

12. If there were an opportunity for you to obtain additional education i working with children/adolescents who have handicapping conditions and/or developmental disabilities, would you be interested in:	Yes	No	Other
Self-instructional materials	55.7 (69.4)	44.2 (23.9)	0.1 (6.7)
two-day workshop	30.6 (72.7)	69.3 (20.5)	0.1 (6.8)
4-month educational program	46.3 (17.6)	53.6 (75.3)	0.1 (7.1)
Continuing Education credits	28.6 (-)	71.3 (-)	0.1 (-
Graduate credits	14.9 (-)	84.2 (-)	0.1 (-)
2-hrs weekly for 15 weeks	40.8 (-)	59.1 (-)	0.1 (-)
day program	34.7 (-)	65.2 (-)	0.1 (-)
evening program	15.6 (-)	84.3 (-)	0.1 (-)
Saturday program	48.3 (-)	51.6 (-)	0.1 (-)
Other	3.4 (10.9)	96.5 (82.3)	0.1 (6.8)

H. School Physician

	Yes	No	Other
13. Do you have a school physician?	95.2 (29.9)	4.7 (67.6)	1.1 (2.5)

	Mean Hours	S.D.
If yes, approximately how may hours per week does he/she work in the school?	3.4 hrs/wk (5.7)	6.1 (9.6)

I. Support Systems

(Responses given on a 5-point scale)

14. In your opinion, how supportive of school nurses are each of the following groups/persons?	Mean	S.D.
a. school secretaries	4.463 (4.129)	.770 (.999)
b. special services personnel	4.076 (4.050)	.965 (.941)
c. school principals	4.373 (3.984)	.813 (.999)
d. students	4.237 (3.971)	.777 (.924)
e. teachers	4.293 (3.934)	.769 (.981)
f. parents	3.925 (3.732)	.797 (.873)
g. school superintendent	4.268 (3.604)	.866 (1.208)

TABLE 2 ...continued

J. Final Question

	PERCENTAGES		
	Yes	No	Other
15. Did you complete this questionnaire:			
a. in terms of your own opinions, activities, etc.	90.4 (92.2)	9.5 (5.9)	.1 (1.9)
b. on behalf of several nurses in your district	9.5 (7.0)	90.4 (90.9)	.1 (2.2)
	Number of Persons		
	Minimum - Maximum	Mean	S.D.
If so, how many?	2 - 32 (1 - 25)	6.6 (5.2)	10.2 (4.2)

APPENDIX B

UCHSC School of Nursing

SCHOOL NURSE ACHIEVEMENT PROGRAM

State Coordinator's Training

March 10-14, 1986

Monday, March 10

School of Nursing, Room 1919

9:00	Registration and Greetings Dr. Jane Swart, Associate Dean Ann Smith, Project Director
9:30	School Nurse Achievement Program History, Overview, Structure
11:00	Course Materials Use of Lesson Plans Locating Content Experts
12:00	LUNCH
1:00	Working with Content Experts The Attitude Unit Dr. Carol Ann Moore, SNAP Consultant
3:00	Course Administration Vicki Fenner-Snyder, SNAP Secretary
4:00	All Health Sciences Center Campus reception for University of Colorado President, Dr. Gordon Gee, Humphrey's Lounge

* * * * * * *

Tuesday, March 11

School of Nursing, Room 1919

9:00	Discussion of State Plans
11:00	Workshop Days Lesson Plans (continued)
12:00	LUNCH
1:00	Self-Instructional Units - SNAP Modules Judith B. Igoe
3:00	Special Assignment - Team Assessment Exercise

* * * * * * * *

Wednesday, March 12

School of Nursing, Room 1911

9:00	SNAP Computer Component Workshop Demonstration, Practice, Return Demonstration
12:00	LUNCH
1:00	SNAP Computer Component (continued)
6:00	SNAP Coordinator's are invited to be guests of the School of Nursing for dinner at The Library, 800 South Colorado Boulevard

* * * * * * * *

Thursday, March 13

School of Nursing, Room 3982

9:00	SNAP Workshop: Teaching Strategies; Practical Management Tips for the Coordinator Ann Smith Henry Bohne
11:00	Evaluation Plan for SNAP Heidi Burgess
12:00	LUNCH
1:00	Review of Media Special Demonstrations
3:00	The Case Study Assignment Nancy Nelson

* * * * * * * *

Friday, March 14

School of Nursing, Room 1934

9:00	The Resource Lab Demonstration
11:00	Summary Discussion
12:00	Coordinator Training Adjourns
1:00	(OPTIONAL EXPERIENCE) Leave for SNAP in Casper, Wyoming

SCHOOL NURSE ACHIEVEMENT PROGRAM

Coordinator's Training

March 10-14, 1986

Participants

Nela Beetem
Bureau of Community Health Nursing
Missouri Department of Health
P.O. Box 570
Jefferson City, MO 65102

Maxine Ferguson
Nursing Bureau
Health Services & Medical Facilities Div.
MT Dept. of Health & Environmental Sciences
Cogswell Building
Helena, MT 59620

Ruth Hutchison
Assistant Professor
Seton Hall University
South Orange, NJ 07079

Suzane Rothacker
MCH-Nursing Consultant
Tennessee Dept. of Health
  and Environment-MCH
100 Ninth Avenue, North
Nashville, TN 37219-5405

SCHOOL NURSE ACHIEVEMENT PROGRAM

Participants

COORDINATOR'S TRAINING, March 10-14, 1986

Henry F. Bohne
Henry F. Bohne & Associates
6552 Windfield Avenue
Parker, CO 80134

Heidi Burgess
Evaluation Consultant
School Nurse Achievement Program
1290 Albion Road
Boulder, CO 80303

Judith B. Igoe
Associate Professor of Nursing
Director, School Health Programs
UCHSC Box C-287
Phone: 303-394-7435

Patricia McAtee, Ph.D.
Program Associate
School Health Programs
School of Nursing
UCHSC Box C-287
Denver, CO 80262
Phone: 303-394-8733

Carol Ann Moore, Ed.D.
Independent Educational Consultant
1807 25th Avenue
Greeley, CO 80631
Phone: 303-353-1644

Nancy E. Nelson, M.D.
Medical Director
School Health Programs
Associate Dean,
School of Medicine
UCHSC Box B-129

Ann N. Smith
Director
School Nurse Achievement Program
UCHSC Box C-287
Phone: 303-394-8733

Jane C. Swart, Ph.D.
Associate Dean for Community
Service and Faculty Practice
School of Nursing
UCHSC Box C-288
Phone: 303-394-8691

STAFF

Vicki Fenner-Snyder
Senior Secretary
School Nurse Achievement Program
UCHSC Box C-287
Phone: 303-394-8733

Virginia Torrey
Program Specialist
School Health Programs
UCHSC Box C-287
Phone: 303-394-7435

APPENDIX C

University of Colorado Health Sciences Center
School of Nursing

SCHOOL NURSE ACHIEVEMENT PROGRAM

MEETING OF THE NATIONAL ADVISORY COUNCIL

DENVER, COLORADO

APRIL 25 & 26, 1985

REPORT

Members present:

Deborah Chapel
Muriel Desrosier
Peter Fanning
Victoria Hertel
Ruth Hutchison
Susan Lordi
Georgia MacDonough
Edward Meyen
Carol Ann Moore
Jerry Newton
Jan Toland

Absent:

Mildred Doster
JoAnn Gephart
Mardi Schroer

Guests, Faculty & Staff:

Eula Boelke
Holly Emrick
Frances Dwyer McCaffrey
Wanda Miller
James E. Strain

Heidi Burgess
Judith B. Igoe
Marilyn J. Krajicek
Nancy E. Nelson
Ann N. Smith

Vicki Fenner
Cathy Schuster

Day 1, Morning

The Spring, 1985 meeting was convened at Writers' Manor by Chairperson, Susan Lordi. Greetings from Dr. Jean Watson, Dean of the School of Nursing were read:

> Very rarely does one have the opportunity to greet distinguished members of an advisory council which has gained the recognition for hard work and accomplishment attained by the National Advisory Council of the School Nurse Achievement Program.
>
> We at the University of Colorado Health Sciences Center School of Nursing share your pride in the success of

> the School Nurse Achievement Program and its national dissemination model. The energy, spirit and cooperation with which you bring together your disciplines make this Council a model for organizations with a serious mission. On behalf of the faculty of the School of Nursing, I commend and support your effort.

Planning for the meeting was described by Ann Smith. The council has the opportunity at this session to determine its own future and direction. A review of the mission and goal statement formulated at the last meeting should be undertaken. How the council might organize itself in terms of membership, liaisons with other organizations, scheduling and organizing meetings, and relationship with SNAP should be decided. A review of potential funding sources (summarized since last meeting by SNAP staff) may be done and a master plan for funding devised.

Report on First Start: Care of Handicapped Infants and Toddlers -- Marilyn Krajicek

First Start is a new School of Nursing project, scheduled to begin July 1, funded by the Office of Special Education. The project will provide training to paraprofessional child care workers so that they will be able to care for and enhance the development of handicapped infants and toddlers. Marilyn Krajicek is the director of the new program; Peter Fanning and Janet Stewart will serve as principal consultants. Many advisory council members and participants contributed letters of support for this project in its proposal stages last November. The project will be developed following the prototype of the SNAP dissemination model.

SNAP Progress Report from the States

Report from Minnesota - Wanda Miller

The School Nurse Organization of Minnesota was the first professional association to become a state sponsor of the course. Having submitted a proposal to the University of Colorado to act as the provider of the SNAP project in 1980 and again in 1981, they were funded for the second year of the pilot project (82-83). Since that time the program has been presented in three locations and 236 school nurses from Minnesota have been enrolled. Minnesota coordinators have offered SNAP both with and without the computer assisted component. An outline of the complete report to the council is attached to this document. (#1)

Report from Southern California - Susan Lordi

California used four master trainers to run the SNAP program in the state, two of which were sent to the University of Colorado for training. The California curriculum is based on three class days using the SNAP objectives and review units. California decided not to use all the Colorado material or slide tapes, but substituted something similar, and for instance talked about the legal issues in California in order to meet the objectives of that module. The planning group looked at the existing curriculum from the standpoint of what had already been offered in required continuing education courses.

Endorsements were sought from county school superintendents and assistant school superintendents. Letters with information about the program were sent to special education directors asking for their support in granting leave time for nurses to take the course.

SNAP courses have been held in both northern and southern regions of the state, and access to medical centers' research labs was acquired for the clinical update day. Loma Linda hospital requested that the public health nurses from the local county be allowed to participate in the clinical update day in exchange for use of the facility. Subsequent to the clinical day, participants were given the names of clinical nurse specialists in the region for every disability. This service facilitated referrals especially since there was no opportunity for return demonstrations and for making specific school arrangements. SNAP has brought about the development of a much better network, and the nursing organizations will continue working in this consortium to provide staff development for new nurses.

The Teacher Education Computer (TEC) Centers at the universities were utilized for the Apple tutorials. SNAP participants had an hour on the computers on Day I to work with a tutorial and gain "user confidence". Access to the computer labs was a problem, and classes had to be scheduled based on computer availability. Local superintendent and special education director support is critical to the success of the course as the TEC Centers are not open on weekends and week day release time is necessary.

A central bank and registrar was used, and the group leaders were reimbursed for mileage. The $120 per person tuition does not cover all the expenses, especially in instances where the students had to come in the night before to access the computers before a.m. office hours. The State Department of Education and Special Education Resources Network has put over $20,000 into the program which covered the cost of bringing trainers to the course site, etc. Inkind resources have also been made available such as printing of flyers by the county superintendents at N/C, and the use of County Mail for outreach to county personnel. Ten sessions have been conducted in California with five run in both the north and south. After the first session of 50, the class size has been limited to a more manageable 30, based on the maximum numbers of computers available at one time. The southern session has had a large participation of NP's from rural schools who have found SNAP very helpful. Teachers and parents have been invited to attend to increase their awareness, and they have responded positively to the nurses knowledge. School of Nursing faculty participated in the SNAP course as well.

The group leaders were all volunteers and comprised of nurse practitioners from the NAPNAP chain and special ed. nurse specialists working in handicapped schools. The rest of the team was made up of parent specialists and teacher trainers. There were 20 trainers and they were provided with scripts.

The one session held on a weekend in the northern region was not successful in that everything had to be paid for and the hospitals could not participate because all the necessary staff was off on Saturday. As a result this course ran over the budget and was supported by the more frugal southern region courses. Petrol Bank also paid some of the difference.

San Diego county was not able to participate in SNAP as they have a policy not to endorse projects developed by out-of-state universities.

Some curriculum revisions were based on the evaluations of SNAP grads who recommended changing the clinical day to Day 2 instead of Day 3. This provided better closure and they were able to incorporate the objectives into the clinical day. The students conducted traechs, all ostomys, oncology, parental nutrition, retrotherapmaledialysis, orthopedics. The best liked format was interaction with the group leader in groups of ten. The small group sessions in the clinical facilities and Day 3 case studies have been valued the most. One format at Loma Linda was a didactic all day presentation to a group of forty. The evaluation of this session was less enthusiastic.

Most of the SNAP students have been BSN's or BA's who still need the 30 hours toward their full accreditation. The Universities waived the Exceptional Child Course allowing them to substitute SNAP. This solved a problem for nurses in outlying areas who've had difficulty taking the required courses due to scheduling conflicts.

There are not many California schools without computers, but accessing them has sometimes been a problem. School office managers have primary access, and at 3:30 everyone clears out including the building principal. The libraries charge by the hour for computer time and also have bankers hours. Instances where individuals had absolutely no access to computers were relayed to the SNAP office. Some of the nurses are computer sophisticated, but even those without prior experience had no complaints about using them.

Design problems with the computer tutorials which have been cited include not being able to go backwards and the delay in pulling up the material.

California will not run SNAP in 1985-86 as they're waiting for a pool of new people to develop. There are a number of nurses retiring after this school year and the new nurses will be needing credentials. A needs assessment will be conducted and the course likely run in Spring 1986.

A two day review and revision session was held in 1984 after the first training year. Another two day review and revision course will be offered in May 1985, and the 48 participants will be using the discs for the first time.

There may be another SNAP day held in a year as the nurses have asked for the opportunity to get together and share their experiences. There are 2,500 school nurses in California, with 1,350 as members of NASN. Four hundred are nurse practitioners. Sixty percent of the new nurses coming into schools have taken SNAP.

Day 1, Afternoon

Special Presentation: Care of the Handicapped Infant - James E. Strain, M.D., Past-President, American Academy of Pediatrics

An outline of Dr. Strain's paper is attached to this report. (#2)

Council Business Meeting - Susan Lordi, Chairperson

Agenda items submitted by council members were taken up for discussion.

The situation of *children with special needs, "shadow children"* in the school setting, who are usually not eligible for special education programs, was discussed. No special techniques within education are known to be of particular benefit to this group of children. Social, cultural and nutritional factors may be most important in determining educational achievement. Truancy and mobility factors also affect the amount of instructional time in school and not keeping up. Parent involvement and advocacy is also low for this group. While this is not an area directly addressed by the SNAP curriculum, this group of children may be one of the most frequently seen by the school nurse.

+++

Resources for parents of disabled children, such as SNAP for nurses, should be available. Parents need a systematic orientation to the special education process. The School Health Program office can be supportive of this type of effort although a program with this specialized focus is ideally based in the community. The report on *Direction* by Fran McCaffrey scheduled for Friday will give more information to the council on organizational progress made by parents' groups.

+++

Social adjustment of *adolescents with disabilities* who are mainstreamed in public education was discussed, in response to a spring '85 *New York Times* education survey. Structured activities designed to foster positive attitudes are essential. Adolescents with disabilities have often not had an opportunity to develop effective social skills. Should there be more emphasis on adolescence in the SNAP curriculum?

+++

The _SNAP registration fee_ was discussed. At its November '84 meeting the council deliberated raising the individual nurse's enrollment fee in SNAP from $120 to $150, allowing $50 to remain at the state level. This discussion was reiterated and a formal recommendation to this effect was made by the council.*

+++

Discussion of the _American Academy of Pediatrics statement_ "Provision of Related Services for Children with Chronic Disabilities" by the Committee on Children with Disabilities followed. Reference to medical services without inclusion of the school nurse was a point of objection although the medical community often interpret nursing services as being an integral part of medical services. Supervision of physical, occupational and speech therapies is an issue raised by the AAP Committee. Should nurses enrolled in SNAP become apprised of these issues? Absence of a definition of related services contributes to the problem. Putting related services under the supervision of medical services may result in removing the services entirely from the educational sphere. Inappropriate prescription of services is a particular concern of the AAP committee.

---

*Subsequently approved by Associate Dean Jane C. Swart and the School of Nursing.

Maintaining ability vs. remediation vs. no usefulness at all of a therapy is an underlying treatment issue. The School Health Committee of the AAP will be discussing the statement at its forthcoming meeting.

Day 01 of the advisory council meeting was adjourned at 5 p.m.

Day 2, Morning

Special Presentation: The National Direction Service Assistance Project - Frances Dwyer McCaffrey, Project Director

Direction Service is a cross-catagorical, inclusive approach to identifying and accessing services for handicapped persons and their families. The Assistance Project associated with Direction is designed to develop state-wide systems for provision of Direction services in specifically targeted states. In each state there will be an identified parent/consumer organization for distribution of information and to serve as a clearinghouse for information about Direction.

Complete report attached (#3).

Council Business Meeting (continued)

Discussion of the *AAP statement* on related services was re-introduced. The team aspects of provision of related services appears to be overlooked in the statement. The distinction between medical care and health care might be suggested to the Academy as well as an elaboration of school health services. Redefinition of related services to include a therapeutic and oversight responsibility of the physician to provide services in the school implies payment by educational funds.

How the concerns of the SNAP advisory council should best be expressed was discussed. Ultimately the organizations represented on the council have the responsibility to respond to the Academy's position. The council will send a letter to the Committee on Disabilities commenting on interest of the council in the statement and the recommendation for futher study of the issues within the organizations represented. In addition, another invitation will be extended to the chairman of the Committee to attend a future Advisory Council meeting.

+++

In response to advisory council recommendations a _research project_ is being organized and written through School Health Programs entitled "Nursing Care in the Schools: Supporting Children with Disabilities." The central purpose of the study is to investigate nursing care received by disabled and chronically ill children in the public schools. Council support for the project as it is developed was requested. The application will be sent to USPHS, Division of Nursing.

In a discussion of the terms "handicapped" and "disabled" as used in the grant application, Carol Ann Moore agreed to write an explanatory footnote on terminology, to be included in the application. Dr. Moore recommended the instructions to writers on disability which are included in the preface of the book _Write with Dignity -- Reporting on People with Disabilities._ The preface will be distributed to council members.

+++

There was a brief discussion of an increasing need to include more information on infectious diseases in school nurse continuing education. A text called Pedatrics: Nursing Update is in progress by several school nurse authors and organized by a professional continuing education center in New Jersey, (CPEC). Two chapters in the text address infectious diseases. Any recommendation for the SNAP curriculum on infectious diseases will be held until a later meeting.

+++

The major task of the council to discuss potential for its longievity and an expanded mission beyond SNAP was addressed by the group as a whole. Edited versions of the mission and goal statement were submitted by council members without substantive changes of content. (Attachment #4). Before operational decisions (membership, direction of meetings, source of funding), could be addressed, there was consensus among members that more direction from organizations represented by council members is needed.

+++

Strategies for dissemination of SNAP to non-participating states was discussed. Funds have been requested as part of the third year application to promote direct consultation between advisory council members and/or state SNAP coordinators and states requesting assistance in organizing SNAP. The major thrust for the final year of the current project is revision and repackaging of course material as needed and renewed state recruitment efforts.

The fall council meeting date was set for November 7 and 8. Susan Lordi adjourned the meeting at 1:30 p.m.

University of Colorado Health Sciences Center
School of Nursing

SCHOOL NURSE ACHIEVEMENT PROGRAM

MEETING OF THE NATIONAL ADVISORY COUNCIL

DENVER, COLORADO

November 7 & 8, 1985

REPORT

Members present:

Deborah Chapel
Muriel Desrosier
Mildred Doster
Peter Fanning
Joann Gephart
Victoria Hertel
Ruth Hutchison
Susan Lordi
Edward Meyen
Carol Ann Moore
Jerry Newton
Mardi Schroer
Jan Toland

Guests, Faculty & Staff:

Herbert J. Cohen
Holly Emrick
Peggy Rufner
Thomas Vernon

Heidi Burgess
Judith B. Igoe
Marilyn J. Krajicek
Patricia McAtee
Nancy Nelson
Ann N. Smith
Jane C. Swart
Jean Watson

Vicki Fenner
Virginia Torrey
Chris Vest

Day 1, Morning - Susan Lordi Presiding

The Fall, 1985, meeting of the National Advisory Council of the School Nurse Achievement Program (SNAP) convened at 9 A.M. in Humphrey's Lounge at the University of Colorado Health Sciences Center. General introductions included Dr. Herbert J. Cohen, Chairperson 1985 of the Committee on Children with Disabilities of the American Academy of Pediatrics. Victoria Hertel represented the American School Health Association in place of Georgia Macdonough.

Dr. Jean Watson, Dean of the School of Nursing, extended greetings to the council and noted that this was the last meeting of the National Advisory Council for the current project. She recounted the many years of commitment and progress made by the council. She expressed a hope that council work would continue into the future as an in interdisciplinary effort on behalf of school children with disabilities..

Special_Report:

Dr. Herbert J. Cohen reported to the council on the status of the work of the American Academy of Pediatrics Committee on Children with Disabilities. Primary areas of attention in committee activities include prevention, chronic illness, school related issues, analysis of therapies and other issues related to children with disabilities.

Dr. Nancy Nelson introduced Dr. Cohen to the group.

Council_Special_Report_by_Dr._Cohen_(summarized_from_a_tape recording).

Thank you for that excellent introduction and for the opportunity to report to this group about our American Academy of Pediatrics Committee on Children with Disabilities activities.

As I see it a gap may exist between pediatricians and nurses in thinking of school health, and related services for children. This is a gap that has to be bridged. Just how this will be done requires some thinking through of health and health related problems. In the past and today nurses have had to use their nursing skills to enhance their role development. But the issue of related services, physicians and nurses and the problems and frictions with the school educational staff present quite a mess. This has led me to an orientation to my work with the committee on disabilities.

I looked at the policy statement called School_Nurses Working_with_Handicapped_Children and I noted that no where in the book is there mention either of the pediatrician or the physician. And then I looked at the Statement on School Health by the American Academy of Pediatrics and found there is no mention, in the statement, of school nurses. We have a big gap here on both sides that needs to be bridged before we can make much progress.

There are many questions that we need to ask: How much training do health professionals need? How much training and counselling do parents need? How extensive are the problems of children with disabilities? How many disabled children are there in schools? We don't even know how many disabled children are being treated in hospitals around the country. We can not get information from Medicaid. We can't even learn from health care insurers how many children are getting care. This a very difficult care-related issue. Obviously it is a significant problem. Issues of finding health care agencies, learning what they do currently and many other points need answered before we, as a committee, can define the policy that is needed.

Questions of what can be learned about the problem are prefaced by questions of: Who are the school nurses? How are they trained? How do they function in the schools? How are reports made? Are the school nurses qualified to care for these children and to what extent do they need additional training?

We (the Committee on Childhood Disabilities) are getting more into the area of hearing problems. This is something our committee has not been doing to a great extent in the past. Early screening and early education are things we need to emphasize more.

In prevention we have developed a national consortorium for a study of the national issues and what physicians do now, an investigation of cases, a means to update ourselves on national legislative issues, screening tools and techniques and their relative value, near normal children who need evaluation, follow-up and other issues.

Another significant problem we encounter is screening and case finding with no means of follow-up care. We raise expectations and have no way to fulfill these hopes for further help. We must handle this problem with great care.

We are finishing a statement now about who does what in the therapy area and will touch on the integration of care need as well. We are also finishing another statement on the physician's role in vocational and prevocational education. We have been sending a disabled physician to national meetings to speak on what it was like growing up disabled.

Also in preparation is a statement on AIDS, one of the most discussed school problems today. Other issues that will have publications include child abuse; a revised manual on mental retardation; care of handicapped newborns; school screening for developmental delays; a package for hospitals on health care issues; a health supervision package; day care center child abuse and others.

The work of the committee is important in that we think together to find ways to consider responses to problems of child care. The question is, how to keep ourselves informed? Our committee is one approach. In the future we will be much more case related with pediatricians from many areas of the country responding to the best means to care for specific problems in children. Continuing to work together we will eventually find the reasonable follow through for child health care. Thank you for inviting me to meet with you.

Comment on Progress and Meeting Tasks - Ann Smith

A report of program status and of program progress was included in the meeting folder. We have had two major project developments resulting from SNAP. Dr. Marilyn Krajicek is directing "First Start: Care of Handicapped Infants and Toddlers" which started September 1, 1985. This project develops a national training model for care infants with special needs from birth to age three. The second project growing out of SNAP is titled "Genetic Application for Health Professionals". This project which started October 1, 1985 is a collaborative project with the University of Colorado School of Nursing and the Genetics Unit of the School of Medicine. The audience is interdisciplinary practicing health professionals from eight Rocky Mountain region states including New Mexico and Arizona. In addition to these developments, Ann Smith and Judy Igoe are preparing a new proposal for an "advanced SNAP" to meet the demand for additional formalized classroom activity by nurses who have already taken SNAP.

The videotape "Clean Intermittent Catheterization" is ready for viewing in the rough cut stage and the council is requested to review the tape. Final editing will be completed after the expert review process is completed.

The major task of the council at this last meeting is to develop a set of final recommendations resulting from the

SNAP experience for the funding agency, the School of Nursing and for the organizations represented on the council. From this meeting should come a statement addressing: 1) the value of SNAP; 2) recommendations concerning the establishment of a formal process to address issues between education and health related to disabled children; and 3) the extension of SNAP and how to accomplish this process in the future. Nancy Nelson asked the group to consider the question "Of what value has SNAP been to the children for whom it was originally designed?" Joann Gephart asked a related question, "What has been the effect of SNAP on changes in the Health Care System?"

Day 1, Afternoon

Evaluation Report - Heidi Burgess

A formal evaluation report was distributed in the meeting folder. A final project evaluation report will be prepared in spring of 1986 to conclude the end of this current funding cycle. This report will be mailed to council members at a later date.

The discussion that followed concentrated on questions of SNAP computer assisted instruction and its value to 550 students recently registered in the SNAP program. The concern about access to computers is gradually being solved as more schools add new computer systems. Some libraries also have expanded computer resources available for general use. In general the computer assisted lessons were very well accepted by students because they could be used at the student's own pace. More learning was reported by students who also used the tutorials on the computers. Some of the content on the computers was remedial and the total response was one of increased learning.

Mildred Doster asked that the next step in evaluation include analysis of what changes have occurred in the care of the disabled child. Perhaps a study of possibly twenty schools to check in detail changes made. Anecdotal information gives us one form of insight but we need now a survey across the board for more complete information on this important concern.

Dr. Burgess was thanked for her excellent report to the group.

Business Meeting - Susan Lordi called for agenda items and the following topics were submitted:

A. Announcements:

1. Report on American Public Health Association School Health Committee meeting

2. The Roundhouse

3. ANA report

4. NEA report

5. National Study - School Health Education

Evaluation: Mildred Doster

B. Discussion Questions:

1. Has SNAP changed the Health Care System?

2. How is state recruitment progressing?

3. Does the title SNAP need to be changed?

4. How will SNAP be funded in the future?

5. What is the future of SNAP?

6. What is SNAP II?

7. Are there new marketing strategies for SNAP?

C. Review of the videotape "Clean Intermittent Catheterization"

Susan Lordi noted that the announcements will be made later in the meeting as time permits. Agenda item discussions provided:

1) Has SNAP Changed the Health Care System? The discussion began with another question - How would one know? Several activities were suggested. A study comparing school nurses who had studied SNAP with school nurses who had not had additional study in the content covered in SNAP would provide some insights. On file in the SNAP office is a principal/teacher study completed in 1983. Additional studies could be done to learn if child care has improved; is more assistance available to children; has duplication of services to children been reduced to or prevented altogether; and other related questions need to be studied. A study of state coordinators to learn of their past and current activities and their future planning could provide additional insights into future organization of SNAP.

In addition we need to study what else is needed to make a better impact with SNAP on the health care system; did SNAP encourage other health care programs to be developed; are more school nurses involved with Child Study Teams; are there other incentives that could be developed to encourage school nurses to take SNAP courses; and should the future focus on SNAP be redirected to preemployment educational programs.

2) How is state recruitment for SNAP progressing? In general the states included in SNAP have been developing

stable programs. Twenty states are currently registered and several other states are considering programs. State Coordinator Training is planned for March, 1986. The office management mechanisms are all in place and will expand as additional states are added to the SNAP program.

The first day's meeting was adjourned at 4:30 p.m.

Day 2, Morning

Council members formally reviewed the new SNAP video tape "Clean Intermittent Catheterization".

Special Presentation: The Design of Health Policy: AIDS, A Case in Point by Dr. Tom Vernon, Director, Colorado State Department of Health. (Summary from tape recording).

Thank you for inviting me to speak to you today. The disease AIDS has presented physicians and public officials with a number of difficult decisions particularly among school age children. First let me review a few of the epidemiological study findings and then we can discuss the risk assessment and risk management on setting of health policy that we as health professionals must do.

You are aware that the human T cell lymphatropic virus III selectively attacks a set of T4 lymphocytes which have a great deal to do with our human immune response. As such by destroying that particular subset of our lymphacytes that makes the infected individual susceptible to an array of unusual outcomes which, if they develop in a full blown way, have come to be defined as Acquired Immune Deficiency Syndrome (AIDS). The virus itself is a remarkable one that is quite complex but appears to be related to a family of viruses that Dr. Robert Gallo of the National Institute of Health and others are studying which cause the T cell leukemias of adults and others.

You have come to known AIDS as the end expression of a spectrum of infections from asymptomatic infection to a full blown disease. It seems clear that there is an acute HTLVIII syndrome, which occurs within, perhaps, several days to weeks of the actual infection of this virus, if a shortterm "flu-like" reaction. Then perhaps twenty to forty percent of those infected would go on to an intermediary complex of symptoms which have been labeled ARC (AIDS Related Complex) involving lymadenopathy, fever and other somewhat nondescript symptoms. (More detailed symptomatology can be found clearly pulled-out in the literature under ARC). Approximately five to fifteen percent of those infected with the virus will go on to full blown disease.

We have been following this disease for about six years and it is not at all clear that we know now what is the upper end of the incubation period. The mean seems to be (given an undefined upper end figure) around three years ranging from, we think, one to five years. There is a recent letter to the editor in the New England Journal of Medicine describing an ARC like illness developing in seven weeks in a heterosexual male. We may not yet have a completely defined law end of the incubation time. The fatality rate for all of those with the infection appears to be not 100% but probably approximately five to fifteen or twenty percent and is yet to be fully defined. But all of these factors are involved in our process of defining public policy.

Advances in our study have developed through three stages: 1) April, 1984 the discovery of the virus; 2) April, 1985 the HDL antibody test was licensed by the Food and Drug Administration; and 3) shortly after the development of the antibody test it was discovered that those who had the antibodies are actively infected with the disease in a high proportion of cases. In the first study, 56% of those with a positive test were actively infected with the disease.

The incidence of disease occurance in the country continues to be approximately 75% homosexual males and 25% intravenous drug addicts, hemophilials, and others who receive blood transfusions, health workers (infected through accidental needle or other puncture wounds), newborn children of an infected mother and heterosexual transmissions. Infections related to transfusions of blood are decreasing now because all blood is tested.

I want now to talk about the generic issue of risk in our society. We in public health spend our time working with questions and problems of risk. Risk is a probability calculated as a figure on which judgements for decisions are made. The public wants clear yes or no answers but the best answer we in public health can give is an assessment of risk potential. Let me illustrate what people think and do about risk. People write their own "risk policy". For instance a family out in California cut back on the sugar in their decaffinated coffee while living on the San Andreas Fault. There are many such examples. Or from a different perspective: how many cigarettes or packs or cartons does it take to increase your risk of dying by 1 chance in a million in one year. The equivalent answer is 1.4 cigarettes. Many events in life increase risks of death and disease.

What we in public health are up against in communicating risk probability to the public involves many concerns. The language of science that is essential to correct responses does not work perfectly with the design of health policy but we still must use it until we can deal fully with complex issues such as AIDS. If we make rigid policy we will drive people to hide their health problems for fear of loss of job or opportunity to finish school. Decisions must be made with parent, child (who is old enough), private physician, school or public health physician and school official. We do not broadcast to the general public what we decide. The Center for Disease Control is now developing position papers that will be available in the future for discussion by us all. We cannot promise zero risk but we can work out the issues together.

Thank you for inviting me to meet with you.

Council Business Meeting -- The outline prepared for the final council report was posted:

A. Background
   Purpose, History
   1. Representation
B. Accessory Outcomes
   1. Sharing with organizations and Individuals
   2. Standards and Evaluation Tool
   3. Computer Completion
      First Start
      Genetics
   4. Resource Generation
   5. Parent Involvement
C. Dissemination Strategies
   1. National Organizations
      Facilities Access
   2. State Affiliate
   3. School Health Education
      Special Education
      Regional Planning Areas or LEA's
   4. University Faculty
   5. Education in Disabilities of children > to basic nursing curriculum (letter to Dean's Council)
   6. Chronic Illness/Adolescent > include in SNAP curriculum
   7. Package materials independently
D. Policy Issues
   1. Deregulation P.L. 94-142
   2. Organizational Policy/regulations regarding disabled children (resulted in formulation)
   3. ASHA Resolution - based on school nurse ratio nurse/pupil
   4. Forum for parents
   5. School Nurse competencies in other areas
      a. increased awareness level of SN and market
      b. school nurse increased awareness for increased continuing education
      c. teacher/administrator support increased

E. Recommendations
  1. Nurse/organization themselves should take leadership for practice/policy (child health)
  2. Mechanisms should be developed
     a. Continue to provide forum - universities & schools and professional organizations to upgrade School Nurse education
     b. Forum - Health, education, parent groups for issues involving children
        Health of all children > to disabled (a base, sex education, health education)
     c. Adequate health budget/alternate payment systems
     d. Media (central dissemination point)
     e. Adequate data systems - number and need of handicapped children in schools
     f. Support research - clinical care of disabled children

Council Business Meeting (continued) -- The discussion of topics was continued from the previous day.

3) Does the SNAP name need to be changed? In favor of the SNAP name arguments included: SNAP is well known under this name and has been for many years; the name is memorable and easily recalled; the name explains the nature of the program developed within each state over the years. In favor of a change in the name of SNAP arguments included: another name would more accurately reflect the serious nature of the course of study; a new name would be easier to present to deans of schools of nursing, graduate committee members and others for discussion of the merits of SNAP; a new name would better represent the principles of SNAP on our student's curriculum vitae and other course resumes.

4) How will SNAP be funded in the future? New grant applications are being considered by federal agencies. Planning is underway now for an advanced version of SNAP and for the development of a graduate degree in the University of Colorado School of Nursing that could include the advanced course.

5) What is the future of SNAP? Predicting the future is not possible but the analysis of the present indicates SNAP is a stable productive program. School Health Services at the University of Colorado Health Sciences Center has recently expanded the programs to include preschool health service programs which further strengthens the base of SNAP. Franchises for SNAP will continue in schools of nursing and state departments of education and health.

6) What is "Advanced SNAP"? As the project is conceptualized in the new grant proposal entitled, "Advanced School Nursing of Children with Disabilities", the course will be developed and implemented over a 3 year period. Four hundred and seventy nurses will be prepared through the School of Nursing and by training course/facilitators for outreach to other schools of nursing and to states where nurses have previously received basic preparation through the School Nurse Achievement Program.

The course will be a one-semester graduate level course designed for the baccalaureate prepared school nurse wishing to pursue chronic illnesses and disabilities of school-age children as a specialty area. Development of course materials will include lesson plans and media productions designed to further standardize the school nurse's unique service role. Nurses enrolled in this advanced preservice course will receive indepth information regarding handicapping conditions of school-age children and health program management and teaching skills necessary for working with school personnel and administrators. Evaluation measures include course content and effectiveness.

7) Are there new marketing strategies for SNAP? A general discussion of marketing of SNAP focused on several points: could a study of the franchise sale process we use now help us to learn what is happening and what has happened in selling franchises; what other educational models exist that impact on the development of SNAP; would more on-site consultations help establish franchises more easily; schools of nursing may hesitate to buy into a model program; is the specialist nature of school nursing a problem since schools of nursing focus on preparing generalists; should train-the-trainers programs be given in other states.

Susan Lordi called on Marti Schroer for a report on the presentation to the NEA House of Delegates of two resolutions. (A copy of the resolutions was included in the meeting folder). Resolution #1 passed as it is in your report. Resolution #2 was misunderstood and a caucus had to delete the word catheterization before the resolution passed.

Mildred Doster reported briefly on the National Study for School Health Education Evaluation. A copy of the summary report will be mailed to you by Dr. Doster later in the Spring of 1986.

Ruth Hutchison reported on the ANA_Community_Based Nursing_Services, a new publication that reports all services available in the community and a second publication called Standards_of_Nursing_Practice_in_Colleges, available early in 1986. Could WCHEN and other regional groups help us to investigate the possibility of a series of regional meetings to help explore new thinking an SNAP and SNAP related activities?

Salutatory Remarks: John J. Conger, Ph.D., Chancellor, University of Colorado Health Sciences Center

Thank you for inviting me to speak with you today. We, here at the University of Colorado Health Sciences Center, are deeply appreciative of the many years of service that you, the members of the Advisory Council, have contributed to the development of the School Nurse Achievement Program. We could not have accomplished nearly as much as we did without your hard work over the years. Please accept our thanks and know that our progress in the future will build on the combined efforts of your past contributions. I hope that we will have an opportunity to see you in the future and, perhaps, to develop new programs and projects together.

The meeting was adjourned at 1 p.m.